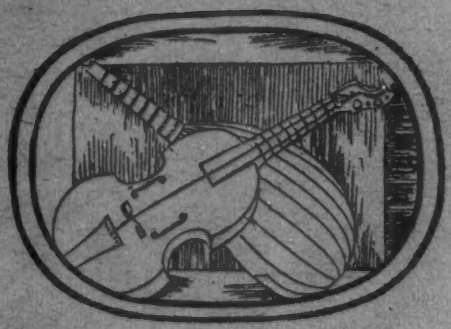
THE
Galpin Society
JOURNAL



MARCH 1952

V

THE GALPIN SOCIETY

*

PRESIDENT
Professor J. A. Westrup

VICE-PRESIDENTS
Mrs Arnold Dolmetsch Dr Rosamond E. M. Harding
Walter F. H. Blandford Adam Carse Christopher J. Galpin

COMMITTEE

Anthony C. Baines
Philip A. T. Bate
Christopher Bradshaw
Max Champion
Thurston Dart
Robert Donington
Brian Galpin
Hugh Gough
Eric Halfpenny
Lyndesay G. Langwill
F. Geoffrey Rendall
Kenneth Skeaping
Reginald Tritton
Maurice Vincent

HONORARY TREASURER
Lyndesay G. Langwill, 19 Melville Street, Edinburgh, Scotland

HONORARY SECRETARY
Eric Halfpenny, 258 Cranbrook Road, Ilford, Essex

EDITOR OF JOURNAL AND FOREIGN REPRESENTATIVE
Thurston Dart, 7 Adams Road, Cambridge

THE GALPIN SOCIETY was formed in October 1946 with the object of bringing together all those interested in research into the history of European musical instruments. Its name commemorates the pioneer work of the late Canon Francis W. Galpin; its aims are to promote the study of the history, construction and functions of instruments of music and all cognate subjects, and to further this research by the publication of a JOURNAL and by all other practicable means. The Society plans to compile and publish bibliographies, catalogues and monographs on organological matters.

The Society is non-profitmaking; application for membership may be made by anyone, irrespective of nationality or country of residence. The annual subscription (one guinea) entitles the member to one free copy of each number of the Society's JOURNAL for that year, and to a substantial reduction in the prices of the Society's other publications.

The Galpin Society

JOURNAL

AN OCCASIONAL PUBLICATION · NUMBER V · MARCH 1952

CONTENTS

Arnault's MS: CECIL CLUTTON	*page* 3
Shawms of the Sardana Coblas: ANTHONY BAINES	9
The 'Tenner Hoboy': ERIC HALPENNY	17
The Malham Iron-Age Pipe: A. RAISTRICK, PROF. SPAUL, E. TODD	28
Musical Instruments in Gotfrid von Strassburg's 'Tristan und Isolde': IAN F. FINLAY	39
James Talbot's Manuscript: WILLIAM A. COCKS, F.S.A.Scot	44
Giustiniani on Instruments: NIGEL FORTUNE	48
Notes and Queries	54
Book Reviews	61
Books, Music and Periodicals received	65

The JOURNAL will appear not less often than once a year. It is issued free to full members of the Galpin Society; the subscription price to others will be one guinea a year post paid.

The responsibility for opinions expressed in contributions to the JOURNAL rests with the writers.

Material appearing in the JOURNAL is copyrighted by the Society and may not be reprinted without its permission.

CECIL CLUTTON

Arnault's MS

HENRICUS ARNAULT of Zwolle was doctor of medicine, astrologer, astronomer, and musician. His name appears in the Burgundian court accounts side by side with that of Jehan de Aren, a maker of mechanical organs. Arnault lived for many years in Dijon, and died in about 1460–5.[1]

During his lifetime he compiled a manuscript, partly by himself and partly by others, on the construction of musical instruments and this valuable document is now in the Bibliothéque Nationale, Paris (MS fonds latin 7295).

Apparently little known in this country, it was edited and published in a limited edition in France, in 1932, by Editions Auguste Picard, 82 rue Bonaparte, Paris. The editors were G. le Cerf and E.-R. Labande. This edition comprises a commentary on the manuscript, its history, etc., and the original Latin text, with French translation, in parallel columns. A separate appendix contains a photographic reproduction of the original manuscript on 23 plates, including some half-dozen scale drawings.

The text, in dog-Latin, is for the most part easily understood, but occasionally the then new technique of precise technical description proves inadequate to the demands made upon it and the meaning becomes extremely elusive. In some passages of this kind one feels tolerably certain that the French translators have not reached the right answer, even though one cannot offer anything much more satisfactory.

The present essay is intended to do little more than draw attention to this very important document, while giving a very brief outline of its contents. The MS fully merits an English edition at least as complete as the French one.

The following instruments are described in varying degrees of detail:

Harpsichord, and four different types of jack
Clavichord
Dulce Melos
Organ
Lute

The MS ends with an essay on musical intervals.

The diagrams are drawn to scale, but not dimensioned. They are in plan only.

'To make a harpsichord (*clavisimbalum*)', says Arnault, 'draw a line BC as wide as you want the instrument to be.' All other dimensions are then multiples or fractions of this arbitrary scale. However, working on the span of an octave as we know it today, a fairly exact set of measurements can be deduced.

The compass of the different instruments varies, but that of the harpsichord is *B* to *a″*, one note short of three octaves. One might suppose that an apparent downward compass to B would in fact be tuned as a short octave to G, but even if this was done in practice Arnault makes no reference to short octave tunings in his treatise.

Continuing with the harpsichord, the speaking length of low B is about 25 inches and of the three C's 24, 13 and 8½ inches respectively. Top A measures 7¼ inches. The plucking point is not exactly marked but appears to be uniformly 2½ inches from the bridge. The strings could be made of steel or brass, one or two to a note.

Despite its small size, the soundboard is pierced by no less than five roses (*fenestra*); the largest, in the bass corner, five inches in diameter and the two smallest less than two inches each. Between the roses are four bars (*trabes*) whose dimensions are not given. They are nailed to the side pieces and glued to the soundboard.

The section on jacks is of exceptional interest, showing that the modern jack (which is not mentioned) was at any rate not standardized by the third quarter of the fifteenth century. It would be extremely difficult, if not impossible, to understand Arnault's account of them without reference to the diagrams.

Four variants are drawn and described of which Arnault prefers the first (Fig. 1). In this, a series of slots, one for each note, is cut in the side of the wrestplank away from the player, and running through these slots from side to side of the instrument is a wire (A) upon which the jack pivots (i.e. very much like the method of hingeing the hammers to their frame in a pianoforte). The jack has a tail (B) which extends downwards through a guide, fitting into a slot in the extremity of the key (C). The actual plucking motion is effected by a rocking tongue (D) as in a modern jack. It appears that the plectrum (E) is of metal. Arnault says that the jack may be made of good quality wood or brass.

The second system (Fig. 2) is also pivoted. The tail of the jack (A) again fits in a hole in the tail of the key. The jack is pivoted to (A) and carries a (metal?) plectrum (D) of triangular form. The opposite end of the jack is linked, on its lower side to a fixed position (E) and on its top side to a second hinged arm (F). Also fixed to the jack is a small

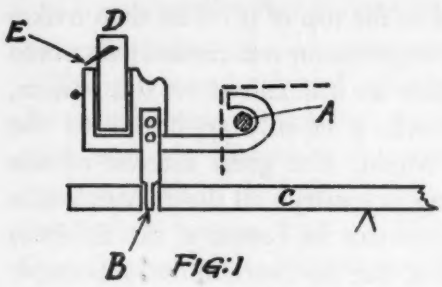


FIG:1

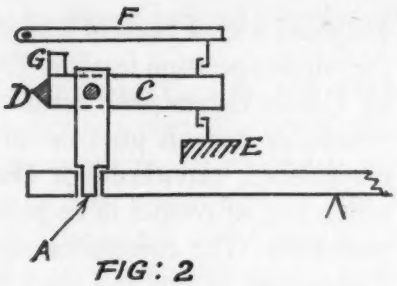


FIG: 2

projection (G). The action of the mechanism appears to be as follows: the key being depressed the plectrum moves sharply upwards, plucking the string as it goes. The projection G then (subsequently) comes into contact with F, moving it upwards, and thus, in its turn, pulling upwards the tail of the jack via its linkage, so that the plectrum will pass the string on its return journey.

This action is not made at all clear in the few words of the description but no alternative interpretation seems possible. At the same time, it is difficult to see how room would be found for this formidable mass of clanking machinery.

The third system is really a mixture of the first two, comprising a jack pivoting on a fixed fulcrum; with a plectrum of the first variety at one end, and acted upon by the key at the other. The main interest of the system lies in the keys being above the soundboard, operating by a sort of pin-action, so commonly found in positive organs up to the eighteenth century.

The fourth system is exceedingly interesting and although the French translation seems to follow the Latin, it is difficult to see how the thing would work. The present writer's interpretation is that the key tail has resting upon it something superficially resembling an ordinary jack, except that there is no tongue or plectrum, but simply a button of metal fixed to its top end. The travel of the key is limited by a stop where, being abruptly arrested, the free 'jack' continues its travel till its metal button hits the string, whereupon it falls back on to the key. The French translation appears to suggest that the jack is glued to the key by a leather hinge, translating *Item ista clavis habet unam petiam colatum superius et oneratum cum plumbo* as 'Item cette touche a une piece' (i.e. the jack) 'collée à sa partie supérieure, et plombée'; this sounds attractively appropriate to the text but seems fatally inimical to the essential free jumping action of the jack as follows from the Latin text. As syntax was not Arnault's strong point, might it not be permissible to translate the passage 'Item the key has a piece (jack)

weighted with a piece of lead glued to the top of it'? This then makes the whole operation feasible. This interpretation was certainly favoured by Canon Galpin who actually made an instrument on this system, which, as Arnault goes on to remark, is equally applicable to the harpsichord, clavichord or Dulce Melos. The great interest of this action lies, of course, in its possessing in embryo all the essentials of a pianoforte. The corresponding instrument in France is the *Echiquier d'amour* and in England the Chekker, but no contemporary example appears to have survived.

Next follows a diagram for laying out a clavichord, in which the speaking length of the strings exactly halves at each octave; and taking the modern octave as the scale for the diagram the length of bottom C string is 20″. The compass of this clavichord is slightly greater than that of the harpsichord, being exactly three octaves, *B–b″*, served by nine pairs of strings, indicating a very considerable amount of fretting. The keys are considerably cranked, low F and top F alone being straight. The bridge is straight and at right angles to the case. The overall dimensions of the instrument (exclusive of the projecting keyboard) are $28\frac{1}{2}$″ by $6\frac{3}{4}$″.

Arnault then returns to the Dulce Melos and gives the diagram for a variety of the instrument which he specially favours. The compass is *B–a″*, one note short of three octaves, and these notes are served by twelve pairs of strings stretched across four bridges. Each pair of strings therefore serves the same note in each of the three octaves, the bridges being arranged so that the speaking length of each pair of strings between the third and fourth bridges is twice that between the second and third and four times that between the first and second. The system is made more clear by the diagrammatic sketch (Fig. 3) which omits all the detail of the original, including the cranking of the keys which, however, follows inevitably from the planting of the bridges. It appears that the soundboard must have covered the whole area of the instrument with the key mechanism below it, as is the case with the virginal.

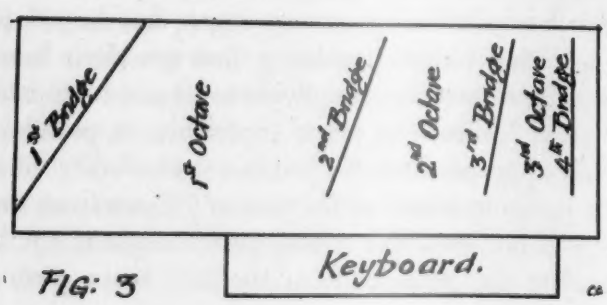


FIG: 3

It is noteworthy that in none of these keyboard stringed instruments is there any hint of a damping mechanism.

The only non-keyboard instrument described is the lute, and this is the only drawing to contain a section as well as a plan. The description starts with the statement that the neck ought to be as long as the greatest width of the belly, '*sed hic nimis est breve propter papirum* (but it is short here because I ran out of paper).' The length of the belly is 1.3 times its width, the bottom end being a semi-circle; the rose is equidistant between the bridge and the neck, the bridge being placed one-sixth of the way up the belly. One bar is just above the rose; another at the point of greatest width and another under the bridge. The back is composed of nine segments and appears to be no less than $\frac{1}{4}''$ thick. No indication is given as to stringing, but assuming a width of 14″, the width of the neck would be $2\frac{1}{2}''$.

The various sections on musical intervals are too complicated to describe in a short space. The notes concerning organs are also too numerous to quote here at any length, but they contain many formulae for scales, including one reed stop (then newly invented for organs), and the composition of various instruments—all old ones on the *blockwerk* principle (i.e. without separate registers). One of these (a positif) contains only unisons; Notre Dame de Dijon comprises quints and octaves; and an unidentified instrument contains, in addition, a tierce—a very early, if not the earliest, mention of this interval being used in an organ, perhaps inspired by the harmonies of faux-bourdon. All these instruments have many more ranks in the treble than in the bass, the last-mentioned example rising from six pipes per note in the bass to seventeen per note in the treble.

One drawing gives the design for a not very beautiful organ-case. A central portion contains the keyboard and a pyramid of pipes, and the larger pipes are arranged in two flats at each side, carried on corbels. The compass is B-F, $2\frac{1}{2}$ octaves, and the layout of the roller-board is shown in detail.

Other articles describe the construction and layout of soundboards and bellows and the composition of pipe-metal. The latter is interesting:

> To make a strong and excellent pipe take two pounds of good pure tin and one pound of pure lead and melt them together until the mixture turns blue or until a scum forms. Then add one ounce of mercury and mix well with an iron stick for the space of a miserere . . . and beware of the mercury vapour, which is poisonous.

(The Latin here becomes very light-hearted, but the French translators have evidently produced the meaning intended, which is followed above.)

One more quotation, from among the organ notes, must complete our brief survey of this remarkable manuscript. It relates to a positive organ described as being of exceptional beauty, and which was clearly of considerable interest:

> And note that the front principal pipes are in tin but all the auxiliary inside pipes are in lead and these are very heavy, being nearly three times heavier than the tin pipes, both small and large; and the foot holes follow no regular system, since the foothole of top C is the same size as bottom F.[2] And one has a wide mouth, another narrow; the one high, the other low; there is therefore no system in the scaling. The organ has been praised by everyone who has heard it.

NOTES

[1] See J. Marix, *Histoire de la Musique . . . sous le régne de Philippe le Bon* (Strasbourg, 1939), p. 131.

[2] In the Renaissance and early Baroque, and (as this MS now shows) in the Gothic era, organ-builders liked to get as much wind as possible into the foot of the pipe, whose power and timbre they then regulated entirely by mouth-treatment. Only in the larger pipes were they bound to reduce the size of the footholes by virtue of the mechanical difficulty of raising enough wind for these larger consumers. In about 1700 builders changed over to the modern system of regulating the power of a pipe by its foothole and throughout the eighteenth century wide, low-cut mouths were the rule. At about the same time the practice of nicking also began to appear. The reference by Arnault to high narrow mouths is therefore interesting, since very few specimens exist. There is, however, a superb instrument of seven stops entirely upon this principle, at Oosthuizen, in Holland, made in 1521. Here a smallish scale (2.7″ at the 4′ pipe) is combined with a fairly narrow (4/15ths) mouth, cut up very high for a Principal (1/3rd, and some higher). It has been suggested that the cut-up has at some period been increased but the Arnault MS gives at least fair grounds for supposing it to be in its original state.

★

ANTHONY BAINES

Shawms of the Sardana Coblas

THE northern part of Catalonia is a locality of unique interest in the lore of wind instruments, for there and nowhere else in Europe the shawms, principal instruments of wind bands four centuries ago, not merely survive but have been mechanically revolutionized like other wood-wind and are flourishing vigorously in something approaching their ancient capacity. They are the principal instruments in the bands (*coblas*) which play the music of the *sardana*, the 'national' dance of the region.

First, to recall what a shawm is: for in many parts of Europe, Spain included, there are rudimentary double-reed instruments which are generally classified as shawms for textbook purposes, even though they are played without a pirouette. An example of these (one that must be specially distinguished from the cobla shawms on account of its habitat, widely ranging over the northern half of the Peninsula) is the *dulzaina*, a small instrument, sometimes with simple keywork, which now and then makes an excursion to the International Eisteddfod.

The cobla shawms are true shawms, representing the instrument as one of the developed species of European wood-wind, and having two chief definitive features: a conical bore, wider than that of oboes, and a broad double reed of cane placed on a metal staple which is partly enclosed in a wooden pirouette. Yugoslav instruments conforming with this specification are described by Brömse[1]; but these are merely surviving precariously on the folk music level and, with the dulzaina, the Breton bombarde and the rest, belong to the province of folklore musicology. Quite different are the shawms of the coblas, with their fine construction and neat modern keywork, played from full-scored band parts by trained musicians, most of whom are also violinists or clarinettists.

According to Spanish works of reference, a cobla about a century and a half ago consisted of pipe and tabor, one or two *tiples* (treble shawms) and bagpipe—evidently appropriate to the simple sardana music then current. However, tiples of that period[2] show no sign of degeneration into the rustic instruments today associated with bagpipe accompaniment in Italy, Brittany and elsewhere. They are well made, of boxwood, keyless and with turned pirouettes, and almost identical with the Praetorius treble shawm except for their length, which is

that of the modern tiple, i.e. about 3″ shorter than in the sixteenth and seventeenth centuries. Further indication that the shawm never became extinct in north-east Spain is found in the not uncommon inclusion of parts for *chirimias* in eighteenth-century villancicos; for instance one performed outside Gerona cathedral in 1710, with parts for two *chirimias* (treble shawms), *sacabuche* and *contrabajo*. It remains to be discovered whether this kind of town band still existed in the early nineteenth century, to suggest the nucleus of the modern cobla. Tradition simply has it that the latter is the invention of José Ventura, 'Creator of the modern sardana'.

Ventura (1818–75), son of an Andalusian soldier, was brought up in the small town of Figeuras in north Catalonia, where he evolved a cobla of a new and enlarged composition which subsequently became and still remains absolutely standard:

fluviol (pipe and tabor)	trumpet I (formerly cornet)
tiple I (treble shawm)	trumpet II
tiple II	tenor valved trombone
tenora I (tenor shawm)	fiscorno I (bass flugel-horn)
tenora II	fiscorno II

string bass

Ventura first introduced this eleven-piece cobla in Barcelona in 1860, he himself taking the leading part of first tenora. But before describing the shawms, some details of the other instruments may be of interest.

The pipe and tabor consists of a pipe (*fluviol*) of unusual design, and a miniature rod-tensioned tabor (*tamborino*) only 4″ across the heads, slung by a cord round the body to rest on the left arm, and beaten with a stick held in the right hand. The pipe has a thumb hole and, in front, five holes of which the lowest two are vent holes, reduplicated at the back. It is played with thumb and *three* fingers (an unusual feature) of the left hand, while three closed keys supplement cross-fingering in supplying semitones. Its compass sounds g'' to g^{iv} (or even higher) and it can be played in all the keys required, which are usually those between E♭ and D. It is written for as a transposing instrument in F. As in the Basque tabor pipes, the knife-edge of the fipple is of metal, while the example illustrated has the entire head joint of German silver. In the cobla its solo function is limited to certain conventional figures which introduce each sardana and separate its repeats; otherwise it simply decorates the ensemble with trills and ornamental figures.

The trumpets are of standard French pattern, in either B♭ or C, and the valved trombone is similar, usually in B♭ but sometimes in C. Occasionally a third trumpet or a second trombone is added, but no

parts for them are included in ordinary sets of band parts. These band parts are of the card form, held, on every instrument including the string bass but excluding the fluviol, in a lyre.

The bass flugel horns or *fiscornos* (this form of the word prevails locally) are rotary-(3)-valved Czechoslovak instruments in C which, held up like enormous bugles, present a curious appearance on first sight. This pitch of C is judged to be more brilliant than B♭ (euphonium) pitch, and is now standard. The string bass is sometimes a three-stringer and often sustains the bass line alone, very effectively. For dancing in the streets the band is raised on a trestle platform with the woodwind in front, the brass behind and the bass player standing at one end.

Chirimia (Catalan *xirimia*), the old Spanish name of the shawm, is sometimes still used in books but seems to have quite vanished from the vernacular, the shawms being known simply as the *tiple* and the *tenora*. They are made by local craftsmen, mostly in the provincial towns. The examples illustrated are the latest models of Juan Fabra, a Gerona clock dealer and repairer who works at his instruments whenever he can absent himself from his shop. He has supplied some of the celebrated Barcelona coblas with their shawms. Big Barcelona band instrument makers and importers like Montserrat do not deal with shawms, but some smaller firms do so, and they are manufactured on a fairly large scale by Pardo of La Bisbal.

The wood usually used is *jinjolero* (the jujube tree), a light reddish-brown wood which, though it grows locally, is obtained for shawm-making from the Valencia area. The keywork is brass, plain or chromium-plated, or, in superior instruments, German silver. At least one of the Barcelona coblas now has shawms made entirely of metal.

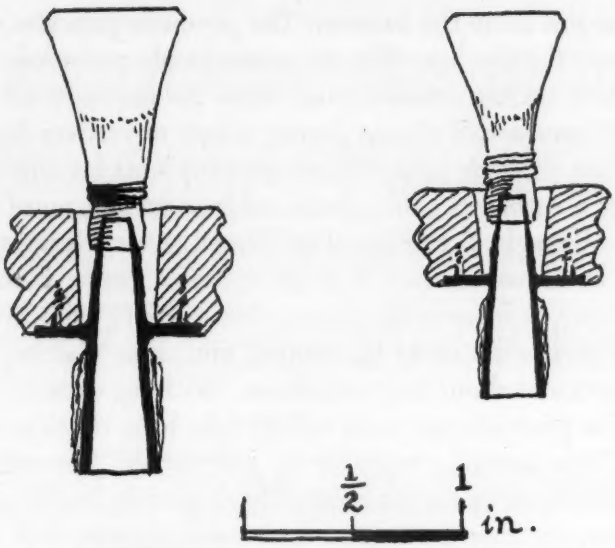
From their names it would be supposed that the tiple and the tenora bear to each other the simple homologous relationship of treble to tenor of a family, but this is not at all the case. Both are soprano melodists, differing, however, quite violently in musical character; and as the sardana melody sways between those two moods, dark and light, which it exhibits in common with most extended forms of dance music, the two instruments succeed each other in vivid contrast, the tenora being in charge of the dark mood. Bound up with this are differences in construction and in manner of playing.

The *tiple* is pitched a fourth above the oboe, six fingers giving *g'*, and is written for as a transposing instrument in F, with ordinary compass *a* to *d'''* (sounding *d'* to *g'''*). The *tenora* is a fifth lower than the tiple and a transposing instrument in B♭ with compass *f♯* to *d'''* (sounding *e* to *c'''*). Higher notes, not ordinarily used, are obtainable on both. It

will be noticed that each has a downwards extension of its natural scale. On the tiple this has come about through carrying the keywork down to the level of the uppermost of the three sets of vent holes of the ancient treble shawm, leaving two sets remaining. Thus are obtained (written) *b*, *b*♭ and *a*. On the tenora this keywork is more extensive, reaching right down a much-elongated bell to give a low *f*♯. The tenora bell is of metal, to save weight—an important provision in an instrument which not only has its point of balance a long way below the thumb rest, but also is held straight out horizontally (as are all the instruments of the cobla) so that the full power of its sound may impinge upon the dancers and spectators. The metal bell is no new feature; a tenora which was once owned by Ventura and is now in the Museum of the Barcelona Conservatorio Superior has one made of brass. However, there is another nineteenth-century tenora, in the Brussels Conservatoire Museum (no. 3122), which has a wooden bell and is also interesting in that the extension keywork is diatonic only, as in ancient bass pommers and many early basset horns.

The key system is generally that which is known on oboes and clarinets as 'simple system', but is usually without the *brille* for correcting F♯. Fabra, on the other hand, has long been making instruments with 'Boehm' rings for the right hand, and has now even added an articulated G♯ to his tenora. Overblowing the octave is by half-hole plate up to *g*″ or *a*″ (players vary) and above that by octave key. The extension keywork varies considerably and makes use of the left thumb as well as both little fingers. There is, of course, no thumb hole.

The bore of the tenora is throughout its wooden part about 3 mm. wider than that of an oboe. To repeat the method of description used by Eric Halfpenny in the second issue of this JOURNAL, $\frac{5}{16}$″ diameter is reached at 2.2″ from the upper end of the tube (excluding the pirouette); $\frac{3}{8}$″ at 4.4″; $\frac{7}{16}$″ at 6.5″; $\frac{1}{2}$″ at 8.3″; $\frac{9}{16}$″ at 11.4″; $\frac{5}{8}$″ at 13.8″; $\frac{11}{16}$″ at 17.2″; $\frac{3}{4}$″ at 19.1″; and $\frac{13}{16}$″ at 24.0″, which brings us to the end of the bottom tenon. Thence the bell begins to flare immediately, reaching 1″ internal diameter at 25.1″, and ending at $4\frac{7}{8}$″ at the bell mouth, 34.8″ from the top end. These dimensions are of an instrument built to standard concert pitch (as are also those illustrated). A pitch war is still in progress between two pitches which the musicians call 'brillante' and 'normal'; some coblas play at the former, which is approximately equal to British sharp pitch (about *a*′=452), whereas others play at *a*′=440, the international standard pitch. The writer had not the opportunity of measuring the bore of the tiple, but it is proportionately a little wider than the tenora's and the tube length without pirouette is 23″.



Sectional drawing of reed and pirouette of tenora (*left*) and tiple (*right*)

The pirouette, called *tudel*, is inserted into the socket at the top of the instrument and is made of two parts: (i) a short cylinder of wood bored with a passage right through; and (ii) a tapered metal tube or staple, the lower half of which is lapped with thread while the upper half projects up through the passage in the wooden part, not quite reaching the top. Soldered on to the staple halfway along is a circular metal base plate by which, with three screws, the staple is permanently joined to the wooden part—a different mode of assembly from that employed in the ancient shawms (see p. 21 of the first issue of this JOURNAL). *Tudeles* of different lengths are supplied for small adjustment of pitch; a long one is shown in Plates V and VI, and short ones in the drawing.

The reed (*caña*) is of ordinary reed cane obtained from the same Spanish sources which nowadays supply great quantities for the French woodwind trade. Its shape is practically that of Mersenne's shawm reed and its manufacture is similar to that of a bassoon reed. The blades are scraped down very fine, and for the usual open-air playing a wide aperture (about 3 mm.) and a good springing resistance to closure are sought for. A player carries in his case, in little wooden boxes, about half a dozen pirouettes each with a reed firmly stuck on to it; otherwise the reed keeps falling off the staple.

The embouchure is most interesting, especially in view of the traditional textbook assumption that the reed of a shawm is totally engulfed in the mouth cavity, and beyond all control by the lips. On the tiple and tenora the player's lips are curled over the teeth and grip the reed

near its base just as on the bassoon. The pirouette provides some light extra support for the lips—not an unreasonable provision when one considers how orchestration treatises stress the necessity for giving an oboist large expanses of silence during which to recover his strength; whereas these shawms (and the ancient ones too) are blown as continuously as a cornet in a brass band, seldom finding more than eight bars or so of rest in a number. Lip control is very important in the shawm as in all woodwind. A huge dynamic range, from *piano* to triple *fortissimo*, is continually in use; this, as every woodwind player knows, involves very exact lip control, and these Catalan bandsmen are very particular about their intonation. With the shawm's wide reed and bore, the pitch of every note will fly false by as much as a semitone unless the lips carefully regulate it; and indeed, according to the players themselves, this is the most difficult part of shawm playing.

For many, the chief interest in these cobla shawms will lie in their connection with the past, and it might be asked how far we may assume that the embouchure just described was also used by sixteenth-century bandsmen with their Praetorius shawms. Therefore let us briefly examine the evidence upon which the 'reed free and uncontrolled within the mouth' theory is founded. We shall find three points: (*a*) affiliation to the Eastern *zamr*; (*b*) visual appearance of shawmists in old pictures; and (*c*) reference to the shawm's loud sound—'the loudest and most violent of all instruments, the trumpet only excepted', as Josef Marx recently quoted from Mersenne (*GSJ*, IV, p. 5). All these points apply equally to the tiple and tenora, but here we can check the inference by observing living performers.

Eastern instruments of the *zamr* kind should never have been brought into the subject at all. As Mr Marx points out, the zamr has a reed which differs radically from a European woodwind reed both in its material and in its manufacture. And in the sixteenth century, shawm reeds were made of arundo donax (*Meerrohr*[3]) just as now. This reed, if placed right inside the mouth, gives only a wild squawk, but the pirouette *prevents* the player from doing this. The zamr reed on the contrary, made of soft durra or maize straw, will not sound a clear note *unless* it can vibrate freely, and so the disc against which the lips rest is placed well below the base of the reed and the reed passes beyond the lips right into the mouth. Brömse (*op. cit.*) noticed the two embouchures in existence side by side in the Balkans: in the Gypsy zamr (*zurla*), with soft rush reed free inside the mouth, and in the old Western shawm (*sopila*), with a cane reed gripped at its base by the lips drawn back over the teeth.

The second point: visual appearance. The cobla shawmists indeed

Two excerpts from sardana 1st tiple and 1st tenora parts: 1. from *El cant de les sirenes* (Sanmartin); 2. from *Es la moreneta* (Carcellé). The tiple sounds a fourth higher and the tenora a tone lower

look as if their reeds were right inside their mouths, but this is an illusion, just as when bassoonists appear to have their lips right down on the wire. This is because men's lips become very thick when curled back between teeth and reed, and they bulge outwards.

Thirdly: violent sound. The tiple and the tenora are by far the loudest of all our woodwind. Mersenne's shawms were almost as loud as his ringing natural trumpet; the Catalan shawms, in their *ff*, are literally as loud as the modern valved trumpet, and very stirring it is to hear, for once, a woodwind instrument possessing this real open-air sonority. At first hearing it is almost unbelievable. To sketch a typical sardana: after the piping introduction of the fluviol, the band enters at full strength. Every wind instrument is held right up, pointing straight forwards (which is why bass flugel-horns are used instead of ordinary tubas) and the effect is a dense blend of dazzling brightness, with the reediness of the tenoras prevailing in the middle and the tiples shrilling in the higher octave. The main section of the dance typically begins with a solo in the minor for first tenora, marked in the part *amoros*. It is played entirely *legato*, *molto espressivo*, with big vibrato and extrav-

agant dynamic nuances. The tenora is always played in this fashion, and its quality is reedy and chortling. Then may follow an answering phrase on the tiples, played in the equally consistent tiple style, which in sharp contrast to the tenora's is *staccatissimo*, less artful, and with a clear, ringing quality vaguely like a trumpet. The brass mainly accompany, though the fiscornos have solo bridge passages and the trumpets, sometimes muted, occasionally introduce a section instead of the shawms. The music example is given to show how typical solo passages for tiple and tenora lie on the instrument.

Softer reeds are said to be used when the coblas give indoor performances in the winter. The shawms are also said to have a place in Barcelona military bands, which the writer has not yet been able to hear. Certainly no more desirable instruments for such a band could be imagined; indeed the mixed woodwind-and-brass band has never been really happy since the shawm fell out of use owing to the craze for the oboe around 1680–1720. The oboe soon proved disappointing in the open air, and was replaced by the clarinet which in turn proved so inadequate that each clarinet part soon had to be doubled or tripled in an attempt to balance the brass. Even so, the failure of thirteen clarinettists to make themselves clearly audible above two cornets in a military band playing outdoors, is quite pathetic; but tradition will continue to have it so, and to hear wind music of the quality which delighted Mersenne and his contemporaries, we must go to the towns of northern Catalonia when they are dancing sardanas.

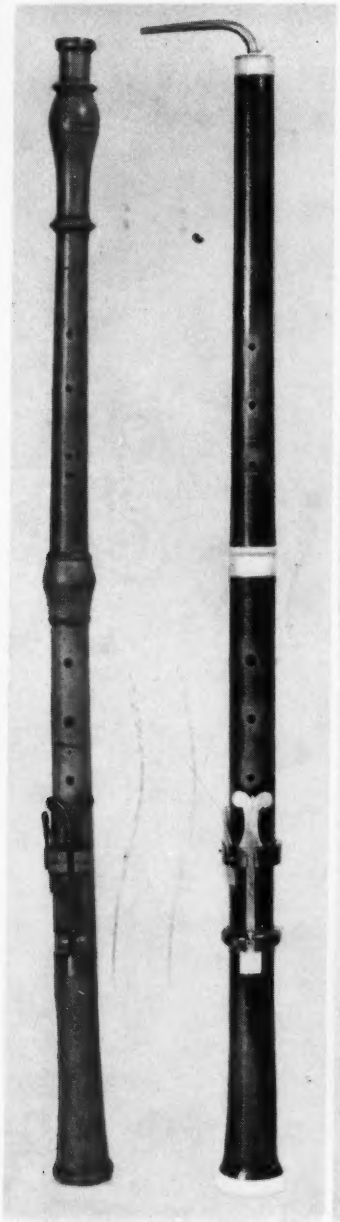
NOTES

[1] P. Brömse, *Flöte, Schalmeien und Sackpfeifen der Südslawiens* (Brno, 1937).

[2] There are two specimens in the museum of the Conservatorio Superior Municipal de Musica, Barcelona, and one at Brussels (no. 3121). One of the former has carved upon the bell a coat-of-arms of an escutcheon over crossed keys.

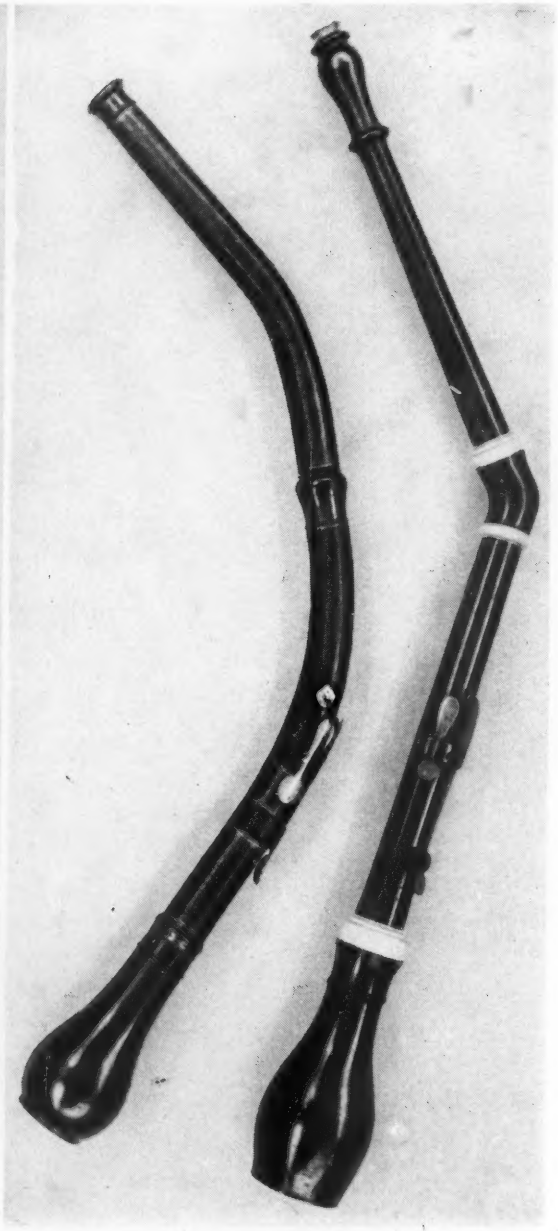
[3] E. Bossert, in *Würtembergische Vierteljahrshefte f. Landesgeschichte* (1900), p. 276.

[For a photograph of the members of a cobla band, for additional photographs of cobla instruments, short extracts in full score from sardanas, and other information about the cobla, see also the paper by H. Besseler, printed in Spanish ('La cobla catalana y el conjunto instrumental de danza "alta" ') in *Anuario Musical*, IV (1949), pp. 93–103, and in German ('Katalanische Cobla und Alta-Tanzkapelle') in *Kongress-Bericht Basel 1949* (Bärenreiter, Cassel-Basle), pp. 59–69.—ED.]



A B

Plate I

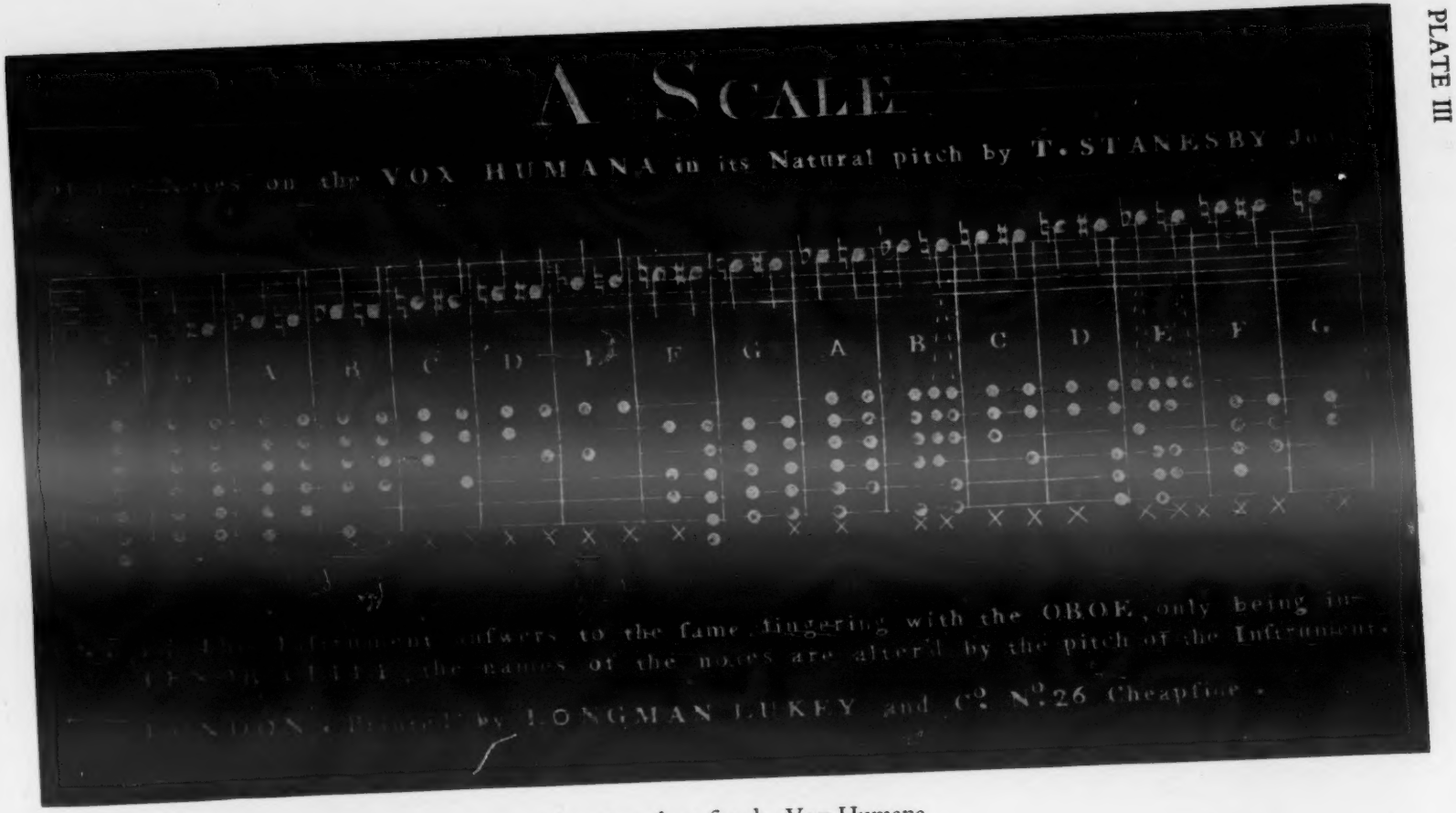


A B

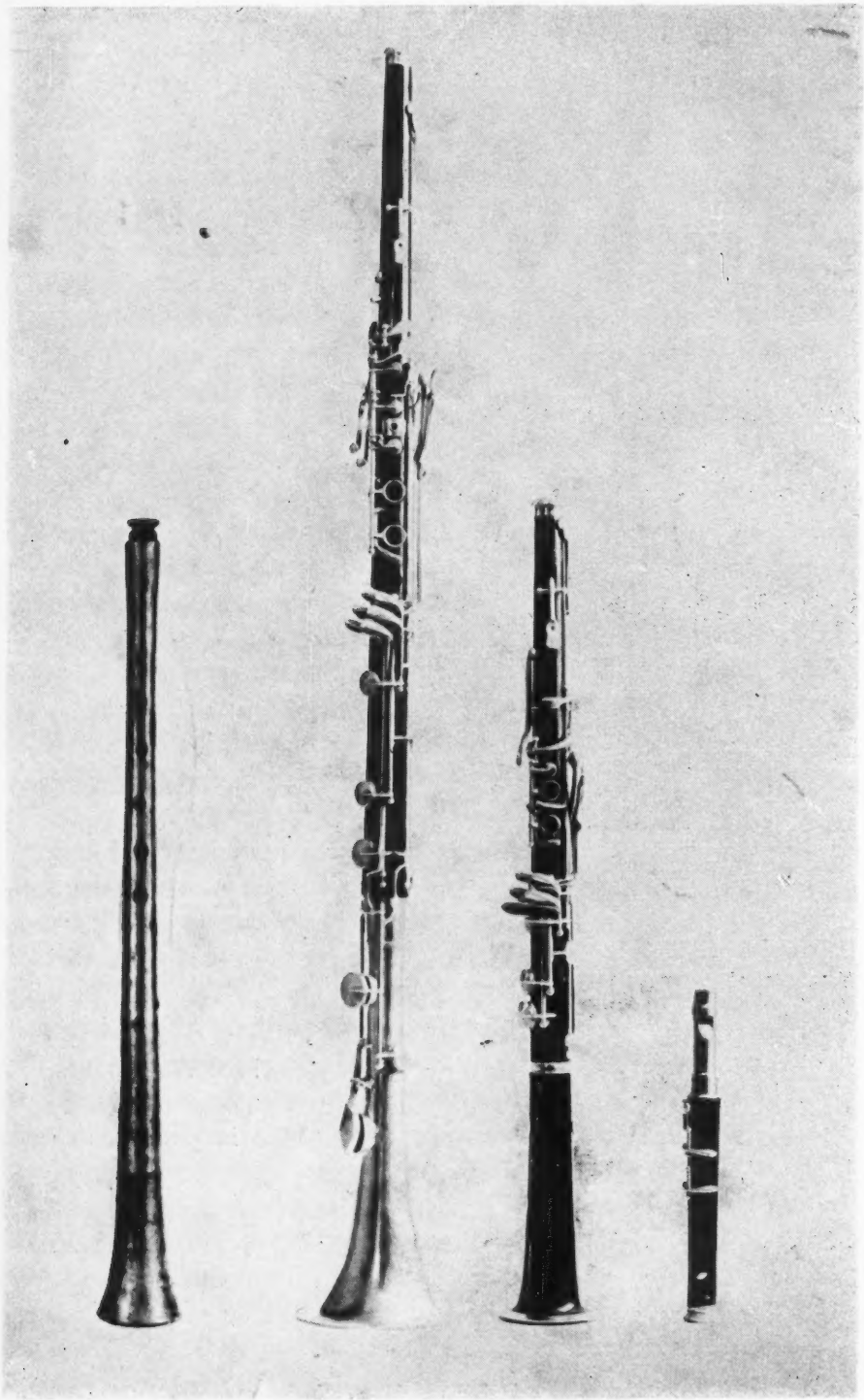
Plate II

Pl. I: Straight Bell-less Tenors. **A** Roustagnec (?French, *c.* 1750)
B T. Collier, London (*c.* 1770) (*Photo:* Byers, Ilford)

Pl. II: **A** Bimboni, Firenze (*c.* 1790) **B** W. Milhouse, London (*c.* 1800)
(*Photo:* H. M. Tower of London)


A SCALE
on the VOX HUMANA in its Natural pitch by T. STANESBY
F A B C D E F G A B C D E F G
to the fame fingering with the OBOE, only being in-
the names of the notes are alter'd by the pitch of the Inftrument.
LONGMAN LUKEY and Co. No. 26 Cheapfide.

Fingering chart for the Vox Humana



Group of four instruments from a Sardana band
left to right tiple, early nineteenth century; tenora, tiple and fluviol, modern, by Fabra, Gerona

PLATES V & VI

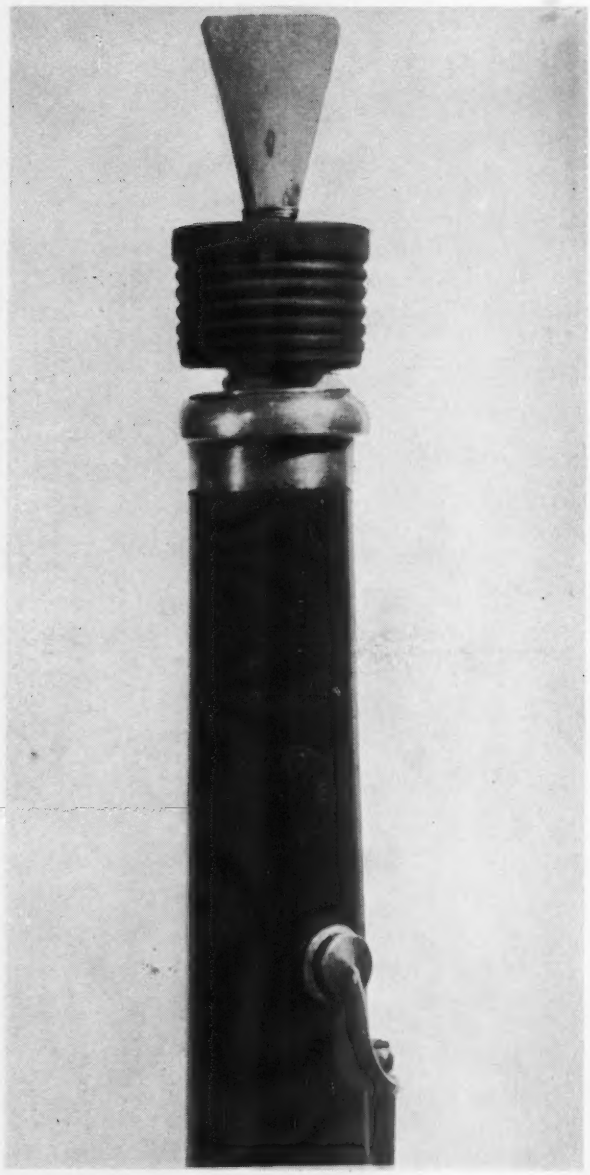


Plate V
Top of tenora
with pirouette and reed

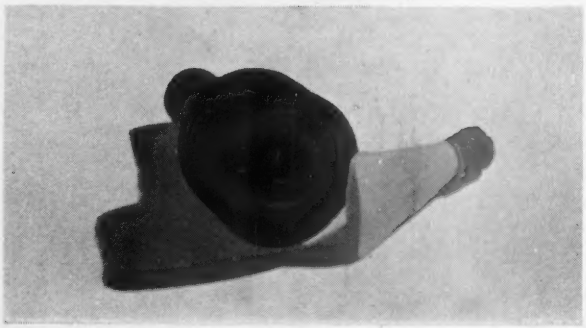


Plate VI
End view of pirouette
and of reed (tenora)

ERIC HALFPENNY

The 'Tenner Hoboy'

RELIABLE information about the larger oboes is difficult to find, because their history has more often been obscured than clarified by the incautious precision of some textbook statements.

The tenor of the family, standing a fifth below the treble instrument, is really the only low-pitched oboe of any general utility, as is shown by its more or less unbroken lineage and its complete assimilation by the modern orchestra. Such instruments must have been needed almost as soon as the French oboes and bassoons had made their appearance, to complete the four-part harmony of that group in its royal and military vogue of the late seventeenth century.

Although technically an oboe in the exact sense, the tenor pursued an erratic course and, during the next hundred and fifty years or so, underwent more changes of outward form and nomenclature than almost any other instrument. This instability is curious and significant. It argues at once a vigorous demand for such an instrument and a dissatisfaction with existing forms, or perhaps indecision as to what was its most convenient form. Such a situation is novel for the eighteenth century, which was on the whole conservative in woodwind matters and mainly occupied in consolidating the discoveries of the previous fifty years. In attempting to account for this on purely rational grounds, it is necessary to start out without any preconceived notions about the uselessly picturesque catalogue of names which has dogged this unfortunate instrument. The tonal differences which they are sometimes alleged to represent are not demonstrable with any sort of precision at the present day, and in any case they would have been relatively unimportant in pre-classical instrumentation.

Any future contributions to the facts rather than the fiction of the matter should start from a closer examination of the earliest specimens yet surviving. Such instruments are not numerous, consequently it is difficult to assess and 'type' them. For what it is worth, however, details are given below of a few specimens examined by the writer at various times. Comparative measurements have been tabulated on a similar plan to that adopted in his article 'The English 2- and 3-Keyed Hautboy' (*GSJ*, II, 1949) and, as before, they have been collated with the particulars given in the Talbot MS[1]. In addition to the five tenors described, the measurements of a typical treble hautboy (taken from

the previous chart) and of an example of the so-called *basse de musette* are also included for comparison. Conclusions based upon so small a number of examples are necessarily incomplete, but they are offered here because the evidence so often runs counter to statements which have become generally accepted.

The earliest tenors appear to have been in every respect treble instruments 'writ large', having all the usual features of the contemporary jointed French oboe. These are: the baluster top; divided third and fourth holes; duplicate 'E♭' keys; and the usual flared bell, recessed at the lip and having two permanently open 'soundholes' in the waist. There can have been no great call for all these refinements of the treble oboe on an instrument playing only rudimentary middle parts and it seems possible that, for a time at least, the tenor reverted to a more economical construction.

Talbot's description of the *Tenor Hautbois* supports this view. This instrument was apparently unjointed, like a shawm, for Talbot says it was 'entire made' by Ashbury. Further evidence of the one-piece construction is his omission to give anything except an overall length and the internal diameters at the top and bell mouth, intermediate lengths and diameters being stated in the case of all the jointed instruments he measured. Other simplifications are evident in the single third and fourth holes and 'E♭' key, although the bell retained the soundholes. A curious point about Talbot's information is the implied pitch of the instrument. As quoted by Mr Baines the bottom note was given as G below the treble stave, on the authority of Gottfried Finger. But Talbot's own observations include the following: 'Tenor Hautbois four notes lower; finger as Basson.' By any normal reckoning, four (diatonic) notes lower than the treble oboe would put the instrument in F, although 'a fourth lower' may have been intended. But from similar statements elsewhere in the MS, 'finger as Basson' appears to mean, in effect, 'seven-holes-closed gives F and other notes of the scale are obtained by the same fingerings as the bassoon'. If it were only a vague general statement, why cite the bassoon? The obvious comparison would have been with the treble oboe itself. It seems then, that this passage refers to the pitch of the instrument, or rather to the note *names* of its fingered scale, disregarding the octave difference with the bassoon. Reference to the charts (Figs. 1, 2 and 3) shows that overall length, 'pitch-length' (top of instrument to hole under great key) and position of upper finger hole are all greater than in actual examples measured by the writer. The pitch must have been comparable with these instruments, or if anything a little lower, so that it is fairly safe to assume that Ashbury's example was in F.

Maker of Instrument	OVERALL LENGTH: upper joint	tenon	lower joint	tenon	bell	TOTAL	CONICITY: smallest diameter	diam: at bottom of upper joint	diam: at bottom of lower joint	aperture of bell
JOHN ASHBURY	"Entire" (but including bell with soundholes)					33 3/4	13/32			2 7/8
ROUSTAGNEC	13 3/16	1 3/16	16 7/8			30 1/16	1/4	1/2		1
T·COLLIER	12 1/2	1 1/2	16			28 1/2	1/4	9/16		1 3/16
M·LOT	12 1/4	1 3/8	13 1/4	1 1/2	6 5/16	31 13/16	17/64	1/2	13/16	1 1/4
BIMBONI	11 1/2	1	13	1 1/16	6	30 1/2	7/32	15/32	23/32	1 1/2
T·MILHOUSE	11 1/2	1 3/16	11 1/8 * 3/8 elbow	1 1/2	7-	31 9/16	9/32	1/2	13/16	1 1/2
BASSE de MUSETTE	8 3/8 + 15 1/2 crook	1 3/8	15 1/8	1 1/2	7 3/4	46 1/4	3/16 crook 3/4 joint	15/16	1 1/2	5
T·STANESBY OBOE, TREBLE [Rendall]	8 9/16	1 1/16	8 19/32	1 5/32	6 1/8	23 9/32	17/64	7/16	23/32	1 11/16

* includes length of tenon at top of lower joint

FIG. 1: tenor oboes, length and bore

Maker of Instrument	FROM TOP 1	CENTRE to CENTRE 2	3	4	5	6	ANGLE WITH TUBE WALL 1	2	3	4	5	6
JOHN ASHBURY	$8\frac{53}{64}$	$1\frac{15}{32}$	$1\frac{25}{64}$	$3\frac{25}{32}$	$1\frac{13}{16}$	$1\frac{3}{4}$	"bored more slantingly"					
ROUSTAGNEC	$7\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{3}{4}$	$5\frac{7}{16}$	$1\frac{7}{16}$	$1\frac{7}{16}$	75°	77.5°	75°	77.5°		77.5°
T·COLLIER	$7\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{17}{32}$	$5\frac{1}{32}$	$1\frac{1}{2}$	$1\frac{17}{32}$	65°		65°			
M·LOT	$5\frac{3}{8}$	$1\frac{15}{32}$	twin $1\frac{5}{8}$	twin $6\frac{5}{16}$	$1\frac{5}{8}$	$1\frac{9}{16}$						
BIMBONI	$7\frac{1}{2}$	$1\frac{3}{4}$	twin $1\frac{5}{8}$	4	$1\frac{5}{8}$	$1\frac{9}{16}$	80°		75°	70°		75°
T:MILHOUSE	$8\frac{1}{2}$	$1\frac{9}{16}$	twin $1\frac{1}{2}$	twin $3\frac{3}{8}\pm\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{5}{16}$	85°					85°
BASSE de MUSETTE	$15\frac{5}{16}+15\frac{1}{2}$	$2\frac{3}{16}$	$2\frac{7}{8}$	$3\frac{3}{16}$	3	$3\frac{1}{4}$						
T:STANESBY oboe	$5\frac{9}{16}$	$1\frac{5}{16}$	twin $1\frac{5}{32}$	twin $2\frac{37}{64}$	$1\frac{9}{32}$	$1\frac{1}{4}$	65°	70°	85°	85°		

FIG. 2: spacing and angle of fingerholes

Maker of Instrument	FINGER HOLE DIAMETERS 1	2	3	4	5	6	Closed key distance (distance from hole 6)	distance from closed to articulated key	Bell holes: distance from top of bell	diameter of bell-holes	*pitch length
JOHN ASHBURY	5/32	3/16	5/32	3/16	1/4	1/4	2 7/8	2 15/16		7/32	24 7/32
ROUSTAGNEC	5/64	5/64	1/8	13/64	1/4	13/64	2 3/4	2 1/8			23 13/16
T·COLLIER	9/64	5/32	1/8	9/32	7/32	3/16	2 5/8	2 1/4			23 11/32
M·LOT	9/64	9/64	twin 7/64	twin 5/32	13/64	13/64	2 1/2	2 3/8	2	single 19/64	22 15/32
BIMBONI	1/8	9/64	twin 1/8	single 9/32	13/64	7/32	2 1/2	2 1/8	1 3/4	single 9/32	22 11/16
T·MILHOUSE	9/64	9/64	twin 7/64	twin 9/64	7/32	7/32	2 1/2	2 3/4	2 5/8	twin 3/16	22 5/8
BASSE de MUSETTE	5/16	3/8	3/8	1/2	9/16	5/8		4 1/2	2 1/2	1/2	inc: crook 35 13/64
T·STANESBY oboe	1/8	9/64	7/64	9/64	5/32 + 11/64	5/32	1 29/32	1 1/2	2	3/16	16 1/4
	* from top of instrument to centre of lower key hole										

FIG. 3: key and hole measurements

BELL-LESS TENORS

Many surviving instruments are of even simpler construction than that described by Talbot. These are in two pieces, jointed between the upper and lower finger-hole groups in the usual way. Usually all the holes are single and there are only two keys. The chief peculiarity, however, is the absence of a separate bell joint and the suppression of the normal features of that member—the two sound holes and recessed lip. The bottom of the tube has a scarcely perceptible flare and the full length of the instrument is used for the lowest note. The absence of a bell cuts down secondary resonance and amplification, and robs the tone of some character and sonority which it might otherwise have had. This may not have mattered for group-playing of middle parts, but, taken in conjunction with the other variations of form of the tenor oboe, the only reason that can be suggested for this economy is a wish to make the instrument more portable and easier to handle.

It may well be asked what possible urgency there can have been about this matter. The tenor shawm, with about the same overall length, had preserved a stable form for centuries. The answer appears to be that not only was the tenor oboe pitched a tone lower than its predecessor (the 'pitch-length' of Talbot's *Tenor Waits* is only $18\frac{7}{8}''$ compared with his *Tenor Hautbois* at $24\frac{13}{16}''$), but by far its most important use was military. If the orthodox oboe form had been preserved the instrument must have been considerably longer; and the exigencies of military service, particularly with mounted regiments, would be such that an instrument upwards of 2′ 6″ in length played vertically would be awkward, not to say dangerous. (Many mounted bandsmen have been killed while playing clarinets, due to their horses rearing.)

Although these bell-less tenors were sometimes made on the Continent (see Plate I, A), the majority of surviving specimens are English, dating from the middle until near the end of the eighteenth century. The English name for the tenor oboe was *Vox Humana* or *Voce Umana*. A fingering chart for this instrument was published by Longman, Lukey and Co. about the year 1777, but must in fact date from the mid-century as its author was Stanesby Junior, who died in 1754.[2] This definitely establishes the fact that the *Vox Humana* was an oboe pitched a fifth below the treble instrument, but the absence of the divided third and fourth holes is indirect evidence that it was of the simple bell-less type. Such an instrument, made by Stanesby Junior himself, survives in the Victoria and Albert Museum. Since a wind instrument called the *Vox Humana* is known to have existed, the

suggestion may be advanced that the organ stop of that name may have derived from the wind instrument, rather than from the human voice which it so imperfectly represents.[3]

BULB-BELL TENORS

Attempts have been made in recent years to urge a separate classification for those double-reed instruments which, by accident or design, have come to be graced with globular or bulbous bell sections in the course of their evolution. The form appeared early in the eighteenth century and only the most credulous will believe that at that time the finer shades of tone-quality attributed to the bulb bell had any musical significance. The oboes were the standard woodwind in Baroque orchestration, not because of any urgent need for their tone colour, though that was much admired, but because they happened to be the only treble wind instruments with the requisite blend of sonority, agility and character to point up the 'bread-and-butter' writing for strings and continuo. The tenor was a group-instrument, and the idea of giving it a 'veiled and mysterious' tone or a 'vibrant and slightly metallic' tone would—regrettably—not occur to those whose job it was to provide a double-reed instrument for playing middle parts, no more and no less.

It is a pity that no acoustician has yet given a detailed account of the effect or function of the bulb bell, and that musicologists have so often been inspired by fancy when dealing with it. All that can be offered here by way of an antidote are personal observations of a single early bulb-bell tenor, that by Bimboni shown in Plate II. The bell of this instrument is pierced with a single large 'soundhole' in the waist, which is a cylindrical section 2″ long and of the same internal diameter as the bottom of the cone. The bulb cavity itself is spheroidal rather than 'pear-shaped' and is, therefore, abruptly concave where it meets the waist. The cavity reaches its maximum diameter, about $2\frac{1}{2}$″, at a distance of $1\frac{3}{16}$″ from the mouth.

Reference to Fig. 1 shows that this bell is shorter than that of a typical oboe, and also that the maximum bore *above* the bell is identical. This suggested the experiment of playing the instrument with an oboe bell, turning it temporarily into what is usually called—without any particular justification—an 'oboe da caccia'. The bell from the Galpin oboe (*GSJ*, II, Pl. II and App. I) which is a shade longer than any other and has the widest flare of any known to the writer, was pressed into service, its proportions making it the most likely candidate for use with a bigger oboe. Both bells have the same inside diameter at the waist and were virtually interchangeable.

The immediate effect of the change was to sharpen the whole instrument by about a third of a tone. The proportion between the pitch-lengths of the Stanesby oboe and the Bimboni tenor is about 5 : 7, and it may provisionally be assumed that, to produce the equivalent pitch of the latter, an open bell would need to be considerably longer than the present bulb bell, whose lower tuning may be due to the long cylindrical waist, the bulb cavity or the constricted aperture, or a combination of all three. This bulb bell is in fact shorter than the majority of the oboe bells recorded in *GSJ*, II.

As was to be expected, the open bell changed the character of the tone. A more important difference, however, was a marked *loss* of sonority. Whereas the original bell gave a full resonant tone, on all notes, the instrument now sounded dull and lifeless despite the added pungency. One had the distinct impression of having to work harder to gain comparable results. This led to the provisional conclusion that the large cavity of the bulb bell acted as a free auxiliary resonator, enhancing the power and quality of tone and the general flexibility of the instrument.

It appears possible that this secondary function of the bell was more fully understood in the earlier double-reed instruments, before this section began to be used as an extension of the resonant length, adding one or more semitones to the lower end of the compass. The perforated bell-section of the shawm occupied nearly half the total length of that instrument, and the same element appeared on all oboes until well into the nineteenth century in a less extreme form. The spheroidal version of such a bell appears—in its early stages at least—merely to have been a convenient means of reducing weight and length while giving comparable tonal results. The more subtle differences in actual tone quality, which we distinguish today because they have become musically important to us, would have been less distinguishable in an age accustomed to, and expecting, considerably more virility in the tone of its double-reed instruments. Bearing in mind the many curious ways in which the apparently urgent problem of the handier and more compact tenor oboe has been approached, it is impossible to avoid the suspicion that the bulb bell was itself originally evolved in connection with this problem.

BENT-TUBE TENORS

The most spectacular method of reducing overall length, and at the same time the most awkward constructional process ever applied to woodwind instruments, was to give the tube a bend which brought the lower fingerhole group nearer to the player's body. This was done

either by setting the whole tube in a gradual curve or by introducing a knuckle or 'knee' joint between the upper and lower sections, which remained straight as before (Plate II, B).

It has repeatedly been stated that the first method involved making the tube in two longitudinal halves, each carrying a semi-circular groove which formed the bore when the two parts were united. Such tenors are usually covered with leather; they closely resemble the curved cornett in superficial appearance, and it is, of course, well known that that instrument is so constructed. In the cornett, however, the curve is 'horizontal' and the fingerholes are bored through the middle-width of one of the halves; but the plane of curvature on the tenor oboe is 'vertical' and the fingerholes would have to be drilled along the line of a weak glued joint on the outer curve, while all moisture would gather along the other joint in the narrow tube. Such construction is technically bad, and an examination of the Bimboni tenor leads the present writer to doubt whether it was ever used for such instruments.

No trace can be detected of the division of the tube of this instrument into two halves. The two long joints appear to have been turned and bored *straight* in the normal fashion, and then set by heat to their present curvature. It is undoubtedly to hide the blemishes left by this process that the instrument is covered with leather. A stout wooden tube with a narrow bore is not like a thin metal one, which buckles when bent unless filled with sand or lead. Wood is naturally resilient and able to resist transverse collapse. The two main bends of this instrument do, however, show a very slight flattening of the tube, to the extent that the diameter across, at these places, exceeds that from front to back by about 1 mm. A comparable distortion of the bore would be negligible, or would present no serious tuning difficulties. Finally, the actual curvature is not uniform. There are two somewhat abrupt bends, suggesting rather localized pressure-points. Had the instrument been halved, the curve would surely have been more evenly distributed.

The angular knuckle was a less satisfactory device as it was structurally weak and there was some difficulty about cutting the channel through it. In the example illustrated (Pl. II) the bore of the knuckle is straight and cylindrical. It has apparently been drilled on the skew from the upper end, with the bit just clearing the inner edge of the socket cavity. As this hole meets the bottom socket, off-centre, it has been crudely gouged away to bring it more or less in line with the bore of the lower joint. The channel is quite short, only $\frac{1}{4}''$ on the inner and $\frac{11}{16}''$ on the outer side of the knuckle, so that any imperfection of profile makes little difference to the behaviour of the instrument,

which in any case is unique and very probably the only example of its type ever attempted by its distinguished maker. All other known Milhouse tenors are of the straight English pattern, while several features of this instrument suggest that it was experimental.

CROOKS

It is fairly generally assumed that all tenors of whatever period or shape were intended to be used with a small bent crook, on which the reed was placed, bassoon-fashion. It is very difficult to glean any definite early evidence of this. Talbot does not mention such an attachment. Only two of the instruments examined were so equipped.

A crook implied a more or less considerable and permanent extension of the total bore of the instrument, necessary to put it in tune with itself and at the correct pitch. As such it differs from a staple, which is a short mount on which the reed is made up and merely serves as a convenient and air-tight connection with the instrument.

The shape of some tenors makes it unlikely that any considerable distance could separate the end of the instrument from the player's mouth. On bent or angular instruments a curved crook is not needed in any case. Such instruments *look* as though a reed on a short staple is all that is required.

Perhaps the clearest guide in this matter is the position of the uppermost finger hole. In the instrument by Lot of Paris, which is a prototype of the modern cor anglais, the first finger hole is very high indeed, while the pitch-length is slightly less than any of the others. This instrument has a bent brass crook of modern form, 4″ long, of which some 3¼″ project. Reference to the charts shows that the distance from the top to the first hole on this instrument is less than one-quarter of the pitch-length, whereas on all the others, and on the treble oboe, the proportion is about one-third. It is, therefore, possible that the remaining instruments are not intended to be used with crooks, but rather with the shorter oboe-type reed and staple. The relatively small upper-bore diameters support this to some extent, although all tenors are built to a smaller 'scale' than the treble instrument; that is, the bore is proportionately narrower and the pitch of the cone shallower. (Here let it be said that this reduced scaling in the larger members of an instrumental family does not, as is sometimes stated, produce a separate sub-group but is the natural way of securing tonal balance, as every organ builder knows. What happens when every dimension of the oboe is reproduced in a larger size is well shown by the *Basse de Musette*, whose bore is twice as long and as wide as the treble oboe, but whose tone is strong and open and quite unlike any of the true oboes.)

The other crook mentioned above is with the Collier tenor (Pl. I) in the Glen Collection, and was illustrated with it in Hipkins and Gibb's *Musical Instruments, Historic, Rare and Unique* (1888). This crook is $4\frac{1}{4}''$ long overall, projecting about $3\frac{5}{8}''$, and bears a small incised stamp with the letters I H. It puts the instrument in about E♭ modern pitch, decidedly too low for its period (1770–80). It seems improbable that this crook really belongs to the instrument, although the initials I H undoubtedly conceal the identity of Collier's brass worker, and are found on the underside of key levers of other instruments by this maker.

★

The writer wishes to express his indebtedness to the various owners for allowing him to examine the instruments discussed in this paper, and especially to the Master of the Armouries, H.M. Tower of London; the Director, Glasgow Art Gallery and Museums; the Principal, Birmingham and Midland Institute; and Mr A. C. Baines, for permission to reproduce photographs of specimens from their collections. His thanks are also due to Christopher Bradshaw of this Society for designing the charts (Figs. 1, 2 and 3). Plate I is from a photograph by Byers of Ilford, Plate II from a photograph made by the authorities of H.M. Tower of London.

NOTES

[1] A. C. Baines, 'James Talbot's Manuscript: I. Wind Instruments', *GSJ*, I, p. 14.

[2] B.M. 1.600/7: see Plate III.

[3] The long list of fancy names for the tenor oboe must, it appears, be extended to include *Tenoroon*. Mr Adam Carse has discovered a catalogue of Longman & Broderip dated 1782 which offers for sale 'Tenoroons or Vauxhumanes'. In Mr Carse's opinion (letter to the writer) the name was not applied to small bassoons until the tortuous arguments of Dr Stone appeared in the first edition of Grove's *Dictionary*. Dr Stone knew of the association of 'Tenoroon' with 'Oboe da Caccia' but preferred to appropriate both to the small bassoon. Since Longman's had already published the finger chart for Vox Humana mentioned in the text, it seems clear that Dr Stone was wrong in this. The resulting textbook confusion has never been tidied up.

The Malham Iron-Age Pipe

A. RAISTRICK

I. Archaeology and Dating

DURING September of 1950 and 1951 the excavation of a barrow on Seaty Hill, Malham Moor, W. Yorkshire, was carried through as part of a course in Field Archaeology arranged by the Council for the Promotion of Field Studies. The course was directed by the writer and was held at the Tarn House, Malham. Among many discoveries the outstanding one for general interest was that of a bone pipe or primitive recorder, clearly associated with an Iron Age burial, and that pipe is the subject of these notes. In this introduction it is proposed to describe the occurrence and suggest the dating of the pipe; in the second section Professor Spaul will discuss the nature of the bone and some problems of making the pipe, while Mr Eric Todd in the main section deals with the pipe as a musical instrument.

Seaty Hill is a small conical hill rising in comparative isolation from the broad expanse of New Close Pasture which lies to the west of Goredale Beck. It is located about two miles to the north east of Malham village, at the head of Airedale, Yorkshire. The general level of the New Close is about 1,300′ O.D. and it is an area broken up by many large patches of bare limestone clints and outcrops. The whole area is rich in Iron Age banks delimiting small fields, with hutments associated with them. The hill stands about 70′ above this general plain and overlooks a very wide area of Iron Age remains. The top of the hill is surrounded by traces of a shallow ditch encircling a flattish mound of 66′ diameter and about 3′ high above the general hill top. This earth work has long been suspected of being a barrow belonging to some part of the Bronze Age and the excavation was directed towards testing this idea. Mr D. Illingworth of Hanlith Hall, Kirkby Malham, the owner of the land gave permission for the dig, and took great interest in its progress; his tenant also kindly encouraged the work.

The first excavation was a trench running approximately from north-west to south-east, and lying 3′ to the south-west of the centre of the mound. As the turf and thin soil were being stripped off this trench, three areas were noted where the gravelly soil was replaced by

a finer loam and these areas proved to be the sites of very shallow graves. These very slight bowl-shaped hollows contained secondary burials, all fragmentary, but clearly recognizable. A large rectangular area of the mound was stripped of turf to include all the central area, and on deeper excavation a primary burial was found here.

If we may at this point anticipate our later conclusions which were only arrived at after the deep excavations were completed, the barrow was found to have under its centre, a primary burial which by analogy and style, was dated to the Early Bronze Age. In the original surface of the hill top, two roughly circular holes had been dug, slightly impinging on one another, to a depth of 3′ 6″. In one of them, the north-westerly one, a skeleton had been carefully placed in a sitting position, with knees drawn well up, and was facing the second hole which is to the south-east. The second hole was almost filled with a carefully built cairn of moderate sized boulders, but nothing was buried beneath or within it. No artifact of any kind was found with the skeleton. These holes had been filled with a fine sandy and gravelly loam, up to the hill top level; then a covering of coarser material in which were several larger boulders had been placed as a flattish mound about 15′ in diameter and 1′ high, over the two holes. A second large diameter mound, about 3′ high originally, mainly made of limestone rubble and some of the local boulder clay, was then built over the area. This mound is surrounded by a shallow ditch and the kerb of the mound was reinforced by a toe of larger boulders of limestone.

The secondary burials were made in the surface of this larger mound generally not more than 9″ below the present surface. With the completion of the examination of the whole mound, during September 1951, we learnt that there were not less than thirteen of these secondary burials, and sufficient material was obtained to date them to the Iron Age and probably to the middle part of that period.

The burials are extremely fragmentary and are much more like token or ritual burials than like inhumation. In each case only some of the larger limb bones, a few ribs, a few bones of the extremities, fragments of skull or jaw and occasional teeth were found. Vertebrae were entirely absent and only in one case was part of a scapular found. This all suggests that the bodies had been exposed after death for some time, to allow birds and weather to clean them of flesh. After that, some bones had been retained for use and a selection of the rest was buried. There was some evidence to suggest that the bones had been placed carefully with the limb bones approximately in the position of a crouched skeleton. Many harder bones (e.g. the shin bone) were broken. and there were present many cut and pointed bone pieces

which showed usage and wear, possibly made from earlier skeletons.

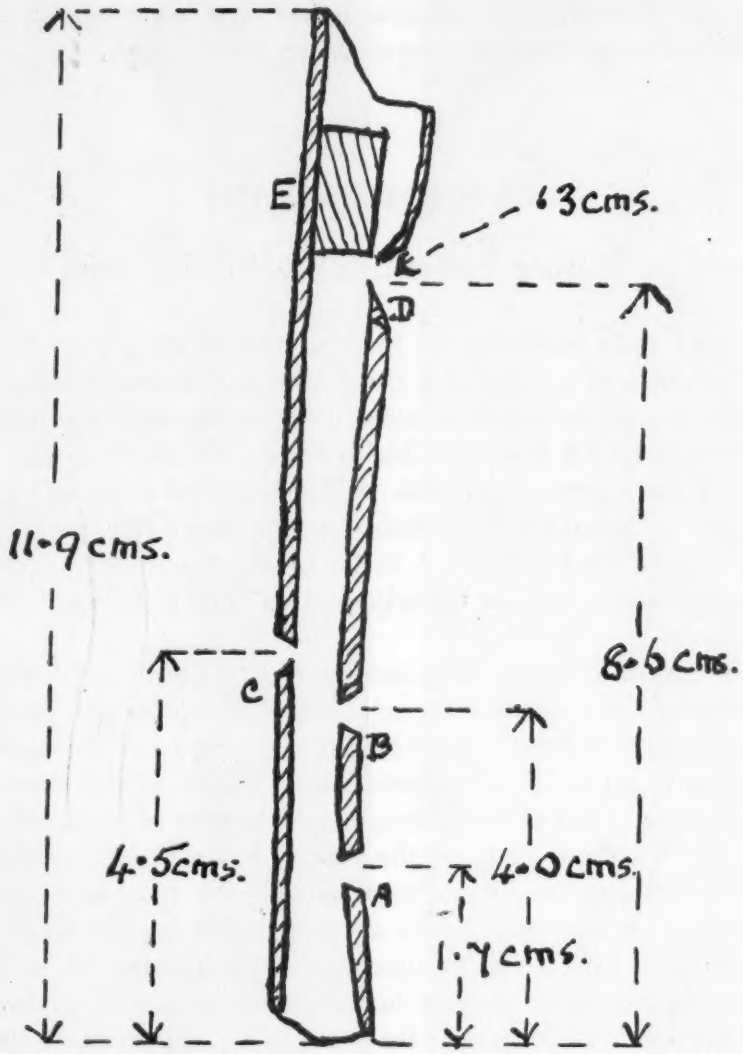
In four of these burials there were fragments of iron, in two cases the recognizable fragments of iron knives, placed under the larger bones in a position that might have represented the knees. In three others a single bead was found among the bones, one of polished jet, one of carved ochre, and one of white glass with a band of blue glass inlay; with one of these there were some small pieces of pottery. In the burial, which was approximately at the centre of the mound, the limb bones were resting on the bone pipe; like the knives, this had obviously been placed carefully in the burial hollow, and the bones then arranged over it.

The iron objects, the beads and the method of burial agree with comparable secondary burials intruded into older mounds, in many adjacent parts of Craven. The fragmentary nature of the remains, and all features of these burials are a commonplace of a very large number which have been investigated. Many of the Craven burials can be dated to the Iron Age with a date which may range between the second century B.C. and the second century A.D. The knives can be paralleled from several of the Iron Age hutments and are there associated with dateable pottery. The presence of beads suggests three female burials. The thirteen burials are placed in such an apparently haphazard manner that there seems little likelihood of their being made simultaneously; there is, therefore, a strong presumption that the central burial with the pipe and fragments of an iron knife, was the first and most important of the Iron Age group. The remaining twelve burials may be subsequent, and be those of relations in the same family group, possibly of more than one generation.

The extremely fragmentary condition of the bones prevents any certain conclusions on this point, and the unsatisfactory state of the burials has been aggravated by the work of shrews and other small rodents whose remains are very abundant in and around each grave. The exposed position of the barrow has subjected it to all the violence of storms, rain and frost through many centuries, and the Iron Age burials have had little protection beyond the thin cover of gravelly soil and turf. The pipe owes its preservation largely to being pressed into a layer of rather clayey soil which underlayed this burial and prevented much migration of ground water. The trampling of cattle over this thin cover of turf probably accounts also for some of the fractures. When obtained, the pipe was filled with a fine loam and was obscured by heavy clay. It was cleaned carefully and its nature recognized, and was then loaned to Mr Aubrook of the Ravensknowle Museum, Huddersfield, who completed the cleaning. With

THE MALHAM PIPE

Section – Actual Size



Hole A - outside ·45cms. Inside ·25cms.
" B - " ·45 - " ·25 -
" C - " ·45 " " ·2 "

great care he fitted a plasticine stop and was able to play musical notes on the pipe. It was examined by Mr Dolmetsch, and then loaned to Mr Eric Todd who has made the full musical study of it; his playing of the pipe has been heard in a BBC programme, and it has also been recorded. The pipe, by the generosity of Mr Illingworth and of the Council for Promotion of Field Studies, has been presented to the Leeds City Museum where the curator, Dr Owen, has co-operated with Mr Todd to secure the recording of its music.

PROFESSOR SPAUL

II. Nature and Anatomy of the Bone

THERE is little doubt that the Malham bone pipe is a portion of the right tibia of a sheep. It is not always easy to establish the exact identity of separate bones of some domestic animals, especially the goat and sheep, but it was possible to distinguish this bone with some certainty after comparison with similar bones of these and related species in collections at the British Museum, South Kensington, London. I am indebted to Dr F. C. Fraser for the opportunity of making the examination and for his help, and to Miss J. E. King for her assistance.

The original tibia must have been between 17 and 18 cm. in length and about 2.5 to 3 cm. of the enlarged triangular proximal (knee) end has been taken off and about 2.5 cm. from the expanding distal (ankle) end (Fig. 1), so as to leave approximately 12 cm. of the shaft of the bone a more or less uniform straight tube in spite of its slightly converging sides; this is certainly the portion best suited for its purpose (Pl. IX). The upper end is larger not only on account of its breadth but because the cnemial crest on the anterior surface has not yet merged completely into the shaft. This occurs just below the upper hole (W) as the lateral tapering ends to give the minimum width. At the lower end there is a slight expansion after the last hole (B). The middle portion is practically straight.

Compared with the sheep, the tibia of the goat has a distinct twist along its length; and a crest with a sharp rather than rounded edge, reaching further down the anterior surface of the shaft as a prominent ridge and crossing over more to the inside. Also the shaft is not so uniform and has a perceptible curve in its outline. These features are of sufficient distinctiveness to enable the bones to be distinguished without

The Malham pipe

Plate VII
(*i*) Upper surface

Plate VIII
(*ii*) Lower surface

PLATE IX

The Malham pipe
(*iii*) Lateral view with section of a full tibia showing the tubular condition inside the bone

Double small pipe constructed from the notes of James Talbot of Cambridge

PLATE XI

Allemande 3 from Der goeden Fluyt Hemel
opening bars of Comagayn from the Fluyt Hemel
Rosemondt from the Lust-Hof
Opening bars of first variation on Dowland's Lachrymae from the Lust-Hof

Some music from the Dutch recorder books

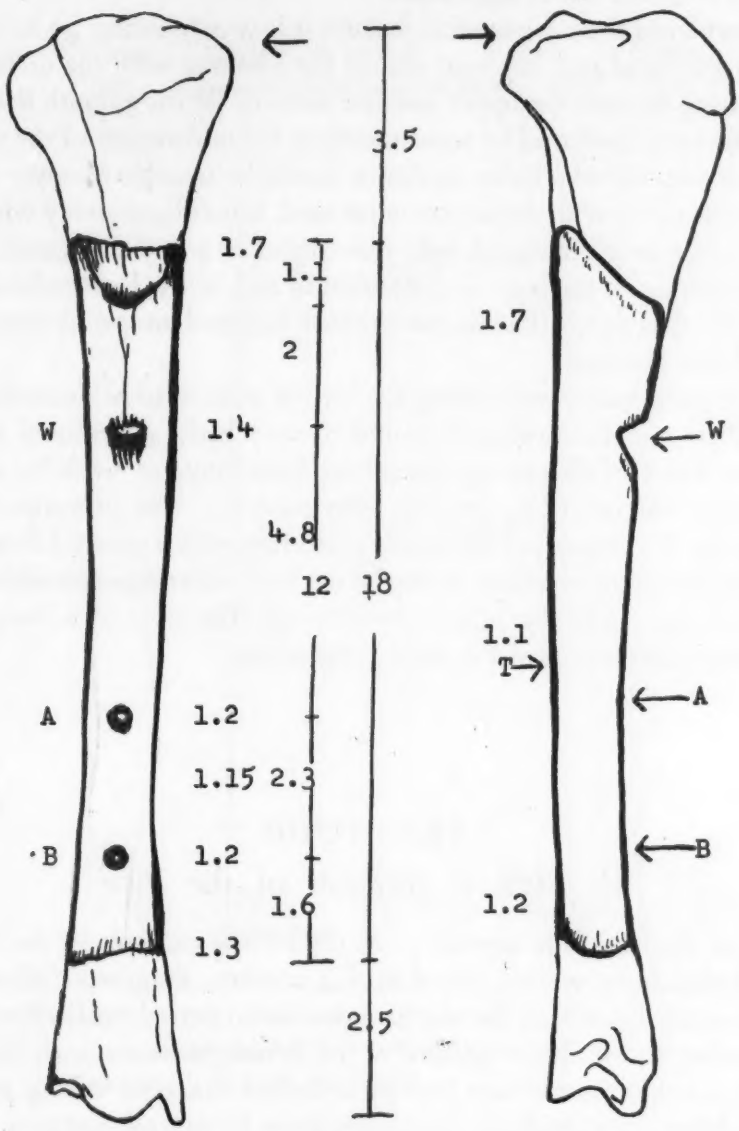


FIG. 1

Diagram showing the approximate relation of the bone recorder to the bone from which it was made. Numbers represent distances in cm. W, A, B=holes on upper side; T=thumbhole on lower side

difficulty. As the crest crosses the anterior surface towards that side of the limb nearest the body its direction gives an indication whether the tibia is from the left or right limb.

Apart from these anatomical features it is worth noting (*a*) how the larger proximal end has been shaped for blowing with the underside projecting beyond the upper anterior surface; (*b*) the smooth flat area that has been produced by some means in the mid-region of the upper surface over the two holes, so that it would be possible to cover them more efficiently with the fingers when used. It is difficult to say whether the surface over the thumb hole was treated in a similar manner. The inside surface of the bone is quite smooth and, as the longitudinal section of a tibia shows (Pl. IX), would have required no special treatment in the first instance.

Sheep and goats were among the earliest animals to be domesticated and their remains have been found in very early agricultural settlements. Bones of the turbary sheep have been found at Neolithic settlements in Britain dating around 2500–2000 B.C. The primitive Soay sheep are descendants of the turbary and represent a survival from the earliest period of breeding. Sheep of the Early Iron Age resembled the turbary sheep and the present Soay sheep. The tibia of a Soay ram among others was used for these comparisons.

ERIC TODD

III. Musical Analysis of the Pipe

THE Malham Pipe appears to be the earliest example of the three-holed bone whistle found in this country. Fragments of similar instruments have been discovered from Saxon period excavations and, according to Mr Bruce Mitford of the British Museum, such whistles were common in northern Europe in the late Saxon or Viking period. The discovery at Malham anticipates these by several centuries.

Professor Spaul, of the Zoological Department, Leeds University, has identified the material of the Malham Pipe as part of the tibia of a sheep. The length is approximately 12 cm. and the effective playing length 8½ cm. Details of the other measurements are given in Figure 1. The holes were pierced and enlarged with a rimer which had a taper of approximately 39° and it is interesting to note (in the light of what follows with relation to the pitch of the notes) that these holes are very nearly equal in size.

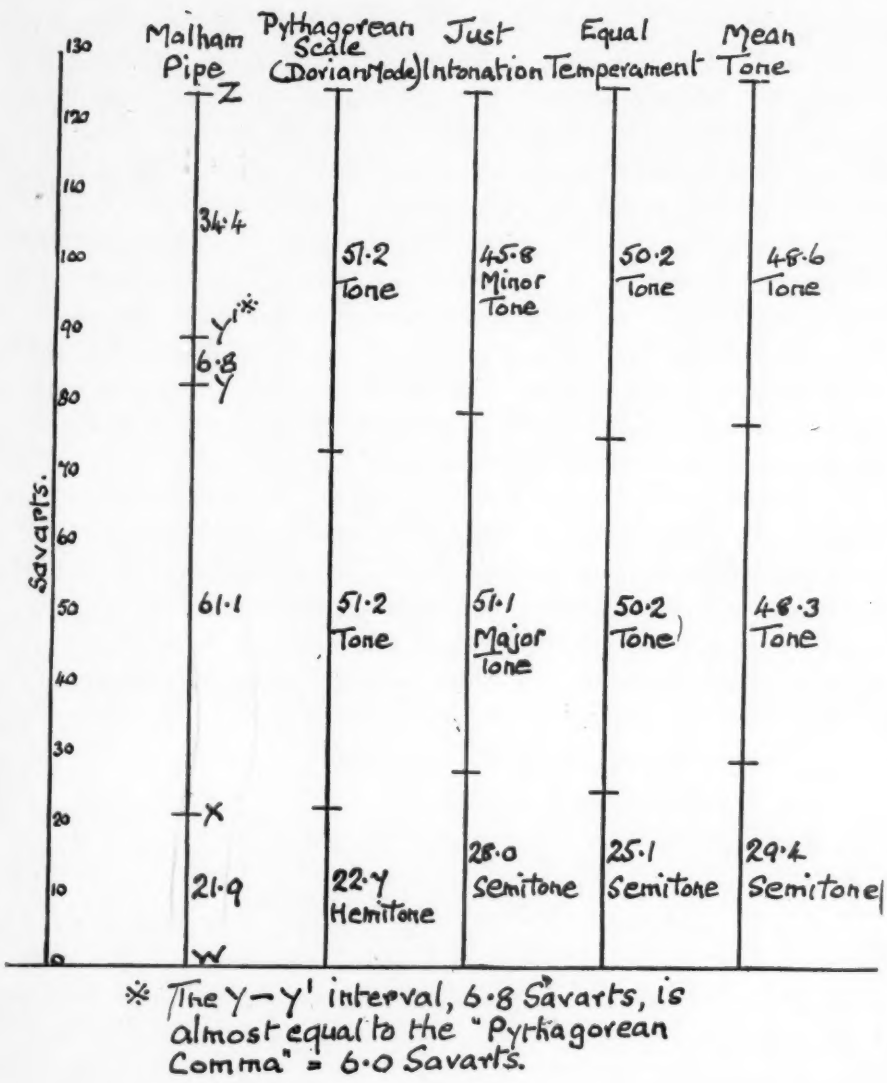


FIG. 2

The missing fipple or plug was restored in plasticine by, I understand, Mr Carl Dolmetsch, who made a preliminary examination of the instrument. After making a number of trials, the writer later was fortunate in restoring the ledge at D with a wedge of the same material so that the pipe spoke again with a series of sweet, clear and well-defined notes, notes which, moreover, so strongly suggested a musical scale that it appeared imperative to establish their pitch and frequency relationships.

Accordingly the help of Dr J. McDougall and Mr R. F. Youell of Leeds University Physics Department was enlisted to determine the frequencies, and I am greatly indebted to them for their help in this matter. The method adopted was to calibrate a sonometer against tuning forks of known pitch and then to make readings for each note of the pipe. Wind instrumentalists will readily understand that such readings showed some variation according to the pressure applied in playing. Eventually the pitch of what may be described as the 'middle' of each note was determined. These results were checked by a further series of experiments in which the pipe was actuated by a mechanical blower with a manometer attachment to measure the air pressure. In these experiments a curve of pitch against pressure was obtained for each note and the mid-point of each curve showed a sufficiently close approximation to the 'middle' note obtained by mouth blowing. It is anticipated that details of the experiments will be published later in the *Proceedings of the Leeds Philosophical and Literary Society*.

The original owner of the pipe, judging by the well-defined teeth marks on the mouthpiece, evidently held the instrument between his teeth and employed one hand to manipulate the notes. In these circumstances it seems probable that the fingering would be such as to give support and that when the thumb hole was closed, either A or B or both would be closed also. These practical considerations seem to establish the fingering as:

1. A, B & C closed; referred to as note W
2. B & C closed, A open; note X
3. A & C closed, B open; note Y
4. A, B & C open; note Z

These notes, together with the fingering C closed, A & B open (which provided a note so close to Y that it was designated Y′) were investigated, the 'middle' notes being:

W 2092 c.p.s. (c^{1v} approx.)
X 2200 c.p.s.
Y 2532 c.p.s.
Y′ 2572 c.p.s.
Z 2784 c.p.s.

From these we see that, roughly speaking, W is very close to c^{1v} (British Standard Pitch), X to $c^{1v}\sharp$, Y to $d^{1v}\sharp$ and Z to f^{1v}; indeed the pipe may be played with piano accompaniment without offence as far as intonation is concerned.

The fact that the fundamental tone happens to agree with the prevailing pitch is, of course, without significance. It is the pitch relation-

ships and how nearly the notes correspond to established scales which are of importance, and these we must now consider.

For our purpose the chief advantage of using the Savart scale (301 savarts to the octave) is that it allows us to represent a musical scale in the form of a straight line with the pitch relationships marked as simple linear measurements. In Figure 2 the experimental results for the notes obtained are thus shown beside the relevant parts of the four chief scales in present or past use in Western civilization.

A study of this chart brings to light several interesting facts. The variation of pitch between the highest and lowest notes on the pipe is 124.2 savarts, which differs from a perfect fourth by less than two savarts or one-twelfth of a semi-tone. A similar close correlation lies between the notes W and X (21.9 savarts) and the Pythagorean hemitone (22.7 savarts) which differ by only one-thirtieth of an equal-tempered semitone. True the position of Y is about 10 savarts too high to give complete correlation with the Pythagorean scale, but, apart from this, one cannot escape the surmise of Grecian influence in the making of this pipe, especially when one remembers the importance the Greeks attached to the perfect fourth. It is no part of the writer's intention to plead a case, but it is remarkable to see that the distribution of notes W, X, Y, Z is semitone, tone, tone — the same disposition as the notes in the Dorian mode, the earliest of the Greek scales. Finally there is the interval of 6.8 savarts between Y and Y′, which is almost exactly equal to the 'Pythagorean comma' (the difference between seven true octaves, and the same number of octaves formed in the Pythagorean manner by taking twelve ascending perfect fifths). This last is, I am sure, merely a fortuitous resemblance and of no particular significance.

We are on safer ground when we sum up the evidence in favour of the Malham Pipe's being an instrument of music as against it being a mere utilitarian instrument for the snaring of birds, apparently the general assumption for such pipes. To quote Francis W. Galpin himself, writing of the recorder in his great book *Old English Instruments of Music*: 'as a more prehistoric instrument, however, it was known from prehistoric days, when it was probably used for trapping birds by imitating their song, as it has since been used for teaching them to sing'.

If this were the case, one imagines the maker of such pipes would hardly tune them so accurately as the Malham Pipe is tuned, being content with notes of indeterminate pitch, such as birds usually sing.

In this connection the making of many bamboo and other fipple flutes has convinced the writer of the difficulties of tuning a pipe made

from a tube of irregular diameter such as the Malham Pipe. Such a series of notes could hardly be obtained accidentally. The maker well knew just where to place the holes and how large to make them. Here is an undoubted skill, the fruit of long experience; from the evidence presented by the neatness of the holes, the accurate placing and the remarkable sweetness of the sounds produced, I am inclined to regard the Malham Pipe as an almost perfected specimen of a simple musical instrument evolved from the more primitive pipes of earlier ages.

One further feature of interest which emerges from the investigation is that the highest note on the pipe, Z = 2784 c.p.s. is only 50 c.p.s. (8 savarts, or less than one-third of a semitone) from the point of maximum sensitivity in the whole gamut of sounds *viz.* 2734 cycles per second. This means that for a given energy used in blowing, the Malham Pipe's highest note would carry the maximum distance.

[See also Grove's *Dictionary*, article 'Picco Pipe', for details of an instrument found in nineteenth-century Sardinia that has many striking similarities with the Malham pipe.—ED.]

★

The illustrations (Plates VII-IX) of the Malham pipe are reproduced from photographs made by Mr W. A. Blackledge, the University Photographer.

★

Members of the Society will have received by now their copies of the Exhibition Catalogue. The Exhibition of British Musical Instruments, held by arrangement with the Arts Council at 4 St James's Square, London, was formally opened by Sir Steuart Wilson on August 7, 1951, and remained on view to the public until September 1. Some six thousand visitors saw the Exhibition. The occasion received handsome publicity from the general Press, although few musical papers appear to have noticed it. The BBC found space for the Exhibition in 'Radio Newsreel', and an outside broadcast was given in the Home Service on August 23. Television viewers were offered a half-hour programme on August 9.

Preparations for the Exhibition were set in hand late in 1949, but detailed arrangements were possible only a few weeks before the Exhibition was due to open. A devoted and exceedingly hard-working sub-committee of the Society was responsible for the whole scheme; the Arts Council's generous financial support, together with the loan of part of their elegant premises in St James's Square, turned vision into reality. About 2,500 copies of the catalogue were sold at the Exhibition, and a special edition of 400 copies has been made for members of the Society.

IAN F. FINLAY

Musical Instruments in Gotfrid von Strassburg's 'Tristan und Isolde'

THE authors of the Middle High German epics devoted quite a considerable amount of attention to music, which, it must be remembered, played a very important part in the courtly society of the Middle Ages. Among about fifty epics we find only nine[1] in which music is not mentioned at all. In the epics twenty-nine musical instruments are mentioned by name.[2]

Whereas in most of these works the mention of music is purely incidental to the main course of events, in Gotfrid's 'Tristan und Isolde' (written about 1210) it has a very special significance and forms in many ways the guiding principle of the whole work[2a].

For the purpose of this brief survey of the instruments mentioned in 'Tristan' use will be made of the classification devised by Hornbostel and Sachs[3]. The following instruments are mentioned:

Idiophones: *schelle.*

Chordophones: *harpfe, videl, gige, lire, rotte, symphonie, sambjut.*

Aerophones: *horn.*

1. The *schelle* plays an important part in the episode of the magic dog, Petitcriu (15765–16402)[4]. The sound of the little bell which was attached by a chain to the neck of this dog had the power to dispel any sorrow on the part of the hearer (15845). From the time of the classical example of David and Saul in the Bible we find numerous references to the belief that sorrow and madness can be dispelled by music, and this type of *Musiktherapie* is gaining in importance today in the treatment of mental diseases. Tristan obtained the dog after having killed the giant, Urgan li vilus, and sent it to Isolde. It is interesting to note that it was transported in the *rotte* of a wandering player (16279). Isolde, however, did not wish to be happy when she knew that her beloved was sad, so she broke the bell from its chain and it immediately ceased to ring (16388).

The use of such small bells as ornaments and charms was probably introduced to Europe by the Crusaders in the twelfth century, and is in any case of oriental origin. Bells were also carried by lepers as a warning sign.

2. The *harpfe* is by far the commonest instrument in 'Tristan' and quite a lot of interesting information about its use can be extracted from the numerous references. Thus: Tristan played the harp while in a sitting position (7819, 13308); it was carried on the back (13390), usually by the servant of the knight (16656); before playing, the harp was tuned with a *plectrun*, the *nagel* or screws being tightened (3558). It seems clear that the tuning was not constant, but that it was altered to suit the particular piece to be played. The instrument was played with both hands, the strings being struck on both sides (3553, 8064) much in the same manner as today.

The *Galotten*, wandering players from Wales, and the women of Lut and Thamise were especially famous as harpists. Tristan had learnt the harp from two Galotten (3677) and the poem contains many fine passages describing his virtuosity on the instrument (3601). Isolde is also mentioned as a very capable player (8064, 7994). The sweet tone of the harp—*der harpfen süeze*—is often mentioned (3568, 3588, 7515, 7642, 13358). It would also seem that the harp had a fairly strong carrying power (3566, 3604).

The harp was used mainly to accompany vocal music, as is shown by the oft recurring phrase *harpfen und singen* (3633, 7517, 7523, 7540, 7644, 7675, 7749, 7824, 17210, 17214). Nevertheless it was also used as a solo instrument (3516, 3614). Before the actual piece began, the player would play an introductory prelude, called by Gotfrid *ursuoche* or *grüeze* (3553, 3566). Proficiency in playing the harp was part of the training of the knight and courtly lady of the period, as well as of the wandering player or *Spielmann* (3677, 7989, 7560).

3. From 'Tristan' we gather very little specific information about the *videl*, the main bowed instrument of the Middle Ages introduced to Europe from the East. Nevertheless the players of this instrument must have reached a certain technical standard for there is often mention of their 'art'. Tristan had learnt this instrument from his countrymen in Parmenia (3675). It was presumably used as a solo instrument to play *leiche* and *stampenies* (8058).

4. The *gige* is of Arabian origin and reached Europe by way of the Moors in Spain. It is only mentioned twice in 'Tristan' and neither reference is particularly informative. Interesting, however, is the use of the word in the figurative sense: *jemandes gige sein*, meaning to be mocked by others (11360).

5. The *lire* and *rotte* occur both as bowed and plucked instruments, a fact which is bound up with the introduction of the bow into Europe about the year 1000. In 'Tristan' it seems clear that the lire was usually plucked (8064), although certain passages leave some doubts of the

exact manner of playing. Tristan had learnt the lire from Bretons (3680). Playing the lire was part of courtly training, but it was also an accomplishment of the wandering player (7560, 7989).

6. The Galotten were famous as players of the *rotte* (3677, 16279), to whose national instrument (the crwth) it was related. Apparently the rotte varied greatly in size, for the magic dog Petitcriu could be carried in it (16279). Of another specimen it is said that it was small and decorated with gold and precious stones (13118). The sparse references in 'Tristan' to the manner of playing the rotte are insufficiently detailed for any substantial conclusions to be drawn from them. The instrument was carried on a traveller's back (13118). King Mark found it quite out of place for the Spielmann Gandin to have carried his instrument himself (13140). It was also regarded as impolite that he did not remove the instrument while eating (13158). According to certain of the older investigators (e.g. F. Wolf), the melodies played on the rotte were originally called *rotruwange*; but this word very soon lost its possible original meaning and became the name for a song with a refrain or a dance song.

7. The word *symphonie* has at various times been used for a great variety of instruments[5]; in 'Tristan' it undoubtedly refers to the hurdy-gurdy. This instrument has a very long history, being mentioned in as early a work as the 'Quomodo organistrum construatur' by Odo of Cluny (879–942)[6]. The instrument was sometimes so large that it had to be played by two people, as for example in the carved relief in the Church of St George, Boscherville (Normandy). Tristan had learnt it from his countrymen in Parmenia (3675). The hurdy-gurdy fell into disrepute mainly as a result of the introduction of the portative organ in the late thirteenth century; it was described by Praetorius (1571–1621) as 'ein Bauern und umlaufender Weibern-Instrument'[7]. It is interesting to note that the name of the instrument in certain parts is still *chinforgne*, and that beggars are referred to as *chifoniens*.

8. The *sambjut* is mentioned once only in 'Tristan' in the following dialogue:

King Mark: Sambjut, what is that, dear man?

Tristan: The best stringed instrument I know (3680)

As with the symphonie, the word *sambjut* was applied at various periods to a great variety of instruments, but here the context restricts it to some type of chordophone. According to Sachs[8] it could only be a type of lute or psalterium, while Ambros[9] regarded it as one of the lute- or guitar-like instruments introduced into Europe from the Orient by the Moors or returning Crusaders, making its first appearance in European paintings in the twelfth and thirteenth centuries. As the

instrument would then be still more or less a novelty, we can understand King Mark's question.

9. The *horn* mentioned in 'Tristan' is presumably either the simple animal horn or the olifant; it cannot be the ancient *lure*. The hunting and war horn of the mediaeval knight was the olifant, which became famous through the 'Chanson de Roland'. It was introduced to Europe from Byzantium by the returning Crusaders. Such horns were made from gold, ivory or various animal horns. As they were often very highly decorated these instruments were among the prized possessions of a knight and, like his sword, often had a special name. When Tristan was banished from King Mark's court, he took his horn with him and even carried it himself (16642), his servant, Kurvenal, carrying his harp (16656). To receive a horn as a present was regarded as a very special distinction, and when King Mark made Tristan his hunting master he gave him a horn (3735, 3418).

The earliest horns were naturally very simple, without valves or sound-holes[10]. By movement of the lips a certain limited number of sounds could be produced, but the instruments were in no way suitable for the playing of a melody. Certain passages in 'Tristan' which refer to 'hunting songs' (3223, 3248) must be regarded as poetic licence on Gotfrid's part. The horn, however, possessed great carrying power (4046), and it was therefore used for signalling purposes in war. J. Levy[11] mentions twelve individual hunting signals found in Old French texts, and K. Traut[12] has shown that most of these were also used in Germany to denote the various stages of the hunt. Certain of them are mentioned in 'Tristan' (14370, 13718, 2770, 3442, 3230, 3014). It is interesting to note that no other wind instruments are mentioned in 'Tristan'; except for the horn, all wind instruments were the province of wandering players.

The specific information about musical instruments in 'Tristan und Isolde' is little enough; but investigations of this kind throw interesting sidelights on the history of both music and literature, and they are a much neglected field of study.

NOTES

[1] *Alexius, Der arme Heinrich, Otto mit dem Barte, Herzmaere, Klage der Kunst, Pantaleon, Schwanenritter, Silvester, Titurel.*

[2] *Becken, clie, fiedel, floite, gige, glocke, harpfe, hollunder-floite, horn, leier, lire, monochord, musikwerk, orgel, organistrum, pauke, pfeife, psalterion, rotte, rottumbe, sambiut, schalmei, schelle, stive, sumber, symphonie, tamburin, trommel, trompete.*

[a] See my article 'Music in Gotfrid's "Tristan",' *M & L* XXXIII, pp. 50–4.

[3] *Zeitschrift für Ethnologie*, 46. Jg., Hefte 4 and 5 (Berlin, 1914).

[4] Throughout the article I have used the line-numbering of F. Ranke's edition of 'Tristan und Isolde' (Berlin, 1949).

[5] C. Sachs, *Reallexikon der Musikinstrumente* (Berlin, 1913), p. 367.
[6] Reprinted in Gerbert, *Scriptores I*, p. 303.
[7] *Syntagma Musicum II*, p. 49.
[8] *Reallexikon der Musikinstrumente*, 329b.
[9] *Geschichte der Musik*, p. 236.
[10] *Cf.* Carse, *Musical Wind Instruments*, p. 211.
[11] *Die Signalinstrumente in den altfrz. Texten* (Halle, 1910), p. 28–30.
[12] *Die Anfänge der Jagdmusik* (Leipzig, 1931), p. 43.

★

AN ITALIAN ARCH-CITTERN

In his article on 'The Cittern and its English Music' (*GSJ*, I), the Editor drew attention to a remark of Thomas Robinson's about his 14-course arch-cittern, which 'was first begun by an Italian in Italy, but altered, and strings augmented, by me'. It is possible that Robinson was referring to an instrument called the *Cetarissima*, invented by the Venetian composer Simon Balsamino, and described by him in the preface to his *Prime Novellette* (Venice, 1594), a collection of madrigals *à* 6 dedicated to the Duke of Urbino. The relevant parts of the preface, addressed to the *Magnifici Virtuosi e miei Signori della Città di Urbino*, read in translation as follows:

. . . At greater length I will treat of . . . my *Cetarissima*, an instrument consisting of seven courses of strings (*ordini*), played with the thumb and a plectrum. You hold the latter on the nail of the index finger and grip it with the tip of the middle finger, plucking one or two strings with the thumb and the others with the plectrum, striking downwards (*in giù*). The tuning *A d g c′ e′ g′ c″* (*A re. D. G. C. E. G. C*) is more convenient than that of the lute (a) for the left hand; (b) as regards the plectrum, which cannot move quickly from one string to another unless it strikes the one downwards (*in giù*) having left the other upwards (*in sù*); (c) because of the fullness of sound of the four courses suitable for singing to (*sutili à voti* [sic]); (d) because one can play all seven courses conveniently along the whole of the neck, which normally has 19 frets; and for other reasons. The upper strings are of steel, the lower of brass, the others according to the course, [some being made] of two strings only, intertwined as much as possible. A most sweet instrument, and economical because of the materials used for the strings. Any kind of madrigal can be played on it, either as written (*ordinario*), or an octave higher, or even a fourth higher still. Every sort of consonance *à* 2 or *à* 5 can be played, and in fact it is so good that it deserves to be called the queen of portable instruments.

NIGEL FORTUNE

WILLIAM A. COCKS, F.S.A.Scot

James Talbot's Manuscript

(CHRIST CHURCH LIBRARY MUSIC MS 1187)

III. BAGPIPES

MUCH has been written at various times upon the subject of ancient bagpipes, but most of it is pure surmise, based upon very slender evidence. Some writers, such as Praetorius and Mersenne certainly did describe instruments with which they were familiar, but others more recently, have attempted to give details of bagpipes long extinct, and of which there are no known examples. They write as though they had actually seen and handled specimens! Alleged quotations are given from ancient writers, without references, and when with much labour the sources are traced, as often as not they are discovered to be erroneous. The simple truth is that very little detail indeed is known of early bagpipes, and this even applies to those formerly in use in Britain.

One thing, however, is certain; the bagpipe has taken many forms, and each piping country or locality appears to have had one or more varieties which were peculiar to itself. It is only in comparatively modern days, since the advent of the pipe-band, that any standardization has been attempted. Previous to this, every pipemaker was a law unto himself, with his own favourite set of working measurements and designs. It is not surprising therefore, that the instrument took so many forms, even as lately as the seventeenth and eighteenth centuries. Data of these early bagpipes are very scanty, and we cannot make a great deal out of such descriptions as are furnished by Praetorius, Mersenne and other writers. Their descriptions are good as far as they go, but it would be difficult, if not impossible, to reconstruct the instruments from them. Occasionally, however, a detailed account, of early date, comes to light, and an example of this is contained in the notes compiled by James Talbot of Cambridge (*c.* 1695–1700), and now preserved at Christ Church, Oxford. Talbot gives a thoroughly good description of the instruments seen by him, and records a full set of measurements.

BAGPIPES (TALBOT'S NOTES)

X15. BAGPIPE. SCOTCH

From Headstock to end of Chanter 0.6.3.

From Headstock to 1st Hole (under) $5\frac{1}{2}''$, to middle of 2d 1′; from 1st to 2d 4″, to 3d –5″, to 4th *d.* [=ditto], to 5th *d.*, to 6xth $5\frac{5}{8}$, to 7th $5\frac{1}{2}$, to 8th $6\frac{1}{2}$.

Headstock of Chanter 3′.

Diameter of 1st 1″: 2d $\frac{1}{10}$: 3d 1″: 4th 1″: 5th −1″: 6xth 1″+: 7th 1″: 8th 1″.
Length of 1st Joynt in Bass Drone, from Headstock to Tuning 4′.2″ (length of Tuning 2′.2″. Tuning inserted into 1st Joynt) 6′ 4″ [?=length of 2nd joint].
1st Joynt of 2d [drone] from Headstock to Tuning 2.6$\frac{3}{4}$ 2d Joynt 4′.5″. Tuning 1.5$\frac{3}{8}$.
1st Joynt of Treble [drone] 2′+. Tuning 1′.3$\frac{1}{2}$″. 2d Joynt 3′.5″.
Headstock length 3′.2″, made Triangular viz from 1st (Treble) to 2d 1′.1$\frac{1}{2}$″. 2d to 3d *d*. Bass to Treble 1′.3″.
Headstock of Blast 1′.7$\frac{1}{2}$. Length of Blast 4′.1″.
Diameter of about middle of Bass drone 2″. 2d 1$\frac{1}{2}$″. Treble 1′ [*sic*].

Z. BAGPIPE. SCOTCH. Mr Robinson.
Between Bellows & Bag the Blast. at upper end of wch the wind-fall (or Flap). the Blast inserted into the Headstock. Wind passes through Bag into the Drones & Chanter wch have a different Headstock wch is generally single to 3 Drones [shown on stave an octave too high:] *g*″ Treble *d*″ 2d *g*′ Bass; the least a unison the next a 4th the Biggest an 8th to lowest note of Chanter.
The best way of making Drone reeds is of Elder Shoot in the nature of a Corn reed: they made in two joynts to be short or lengthened. the Chanter generally of Box or Ebony Ivory the lower Joynt of Drone has a tennant fitting socket of the upper.
Between Bag & Chanter passes the Neck wch may be sown or . . . [illeg.] to the Neck, last best. The Headstock put into the Neck & the Chanter wth its reed into Headstock. Between the Bellows & the Blast passes the Neck of leather (crossing right of . . . [illeg.]) at the end of the Neck the Nozzle or Headstock into wch insert the Blast.
Bellows fixd to the Girdle by two clasps under the under-board—the upper board is raised by means of a string fixed at its end wch comes over the right arm. fixd to buttons only a lose [?] leather between boards. Neck fixd about 1′.4″ below the head of under-board.
[Tablature shows fingering from *g*′ to *g*″ (diatonic with F natural) using straightforward closed fingering, *i.e.* with only one of the fingers being raised at a time.
The three drones are here given (on a stave) as *g*, *d*′ and *g*′.]

X16. SCOTCH BAGPIPE. [described as *2nd sort* in the index to X.]
Ivory Headstock whereof 1′ inserted into Bag, 0.3.3.
Its 1st Joynt (without) 3′.2″: its upper Tennon 6$\frac{1}{2}$″.
Lower Tennon or Tuning 2′. 2d Jt.6′.1″.
Bore at head of its 1st Joynt −2″. at Tuning 1$\frac{1}{4}$″ & at end.
Headstock of Blast 1′.5″. Length of Blast 3′.2″. (whereof 5″ inserted into Bellows).
Neck leading to Chanter 6′.2″. Ivory Headstock 3′.5″. Length of Chanter (double bore) 8′ besides Ten^{t} 1′.1″.
From top of Chanter to middle of hole of left bore behind 1′.1″ & to the 2d (or hole above) 1′.4″: to 3d 5″. to 4th 5$\frac{3}{4}$″. to 5th 6$\frac{1}{2}$″. to 6xth *d*. to 7th *d*. to 8th 7$\frac{1}{4}$″.
From top of Chanter to 1st hole of right bore [superscribed *side*]=5th hole of left 3′.6$\frac{1}{4}$″: Now the 4 holes of this bore being even wth the 4 last of the left their distances & bore is the same.
Diameter of each Bore at the Ten^{t} of Ch. 2″: at bottom 1$\frac{1}{8}$′. Diameter of 1st hole, 3d etc. 1″. Breadth of Chanter wch is . . . [illeg.] 5″. Depth 2$\frac{1}{2}$″.

REMARKS

It is obvious that Talbot's figures do not denote feet and inches, as shown by the signs ′ and ″, but are intended (as elsewhere in the MS), to represent inches and fractions. The latter, upon examination, prove to be eighths of an inch. It is uncertain whether the paragraphs headed X15 and Z refer to two separate instruments, or to one and the same, but in any case both would apply to the orthodox small-pipe as we know it. This bagpipe was in use, both in Scotland and in Northumberland, much more commonly in the latter, and the measurements given could be those of either. Talbot describes the bagpipe as 'Scotch', but there is room for doubt upon this point. Many people, even to the present day, regard all bagpipes as being Scottish—an idea completely erroneous.

Paragraphs X15 and Z describe an instrument with open ended plain chanter in the key of G, producing 9 notes, from *f′* to *g″*. The drones as usual, are the keynote, the octave lower and the fifth between. They are written in paragraph Z, one octave too high, and should be *g′*, *d′*, *g*. This type of bagpipe is still in use in Northumberland, having been modernized by the addition of keys and the fourth drone, but it is, in essentials, the old small-pipe of Talbot's time.

The second form of bagpipe described (X16) is of very considerably greater interest, for it is the old double-small-pipe which has been extinct for perhaps two hundred years. The chief feature is the chanter, which has two separate bores, each with its own reed. The first (left) bore is perforated with the usual eight holes, sounding *g′* to *g″*, with the addition of *f′* from the open end. It is in all respects the plain small-pipe chanter of the period. The second (right) bore is perforated for the lower four holes only—*g′* to *c″*—and also produces *f′* from the open end. It will be seen, therefore, that the finger notes *g′* to *c″* are in unison pairs, each pair being closed by one finger laid across. The close fingering employed is the old French musette style, only one finger being raised at a time, but with the fourth finger of the low hand permanently raised, except when *f′* is required. The effect produced when a melody is being played is curious. If the melody note is on the upper hand, it is sounding on the first bore, while the second continues to sound the low keynote continuously, thereby achieving a drone effect. If the melody note is on the low hand, both bores sound in unison, and the drone effect disappears for the time being. It is, therefore, possible to play any note on the upper hand at the same time as any note on the lower hand, thus sounding a simple variable chord. The effect is truly remarkable.

Another curious point of this bagpipe is that the single drone does

not sound the keynote, as is the usual practice, but is pitched an octave lower than the fifth of the chanter. It thus harmonizes with the drone note of the second chanter bore, and produces a fuller chord than if it had simply reduplicated the keynote. The octave above the drone (the fifth on the chanter) would in all probability be sustained during such periods as the melody was on the lower hand, thus arriving at another drone effect.

It may be well to mention, that although the keynote has here been written as G, in order to bring it into line with the usual small-pipe notation, it is in reality considerably lower in pitch, and approximates to *c'*♯. It may also be added that on ordinary small-pipes the pitch is normally one full tone below the note as written.

What is probably a similar instrument to the foregoing is mentioned in George Skene's account of a journey to London in 1729 (printed in the *Third Spalding Club Miscellany*, vol. 2). Skene describes having heard a pipe at Preston, Lancashire, playing the double small-pipe, and 'not winding them even', that is, not in unison. He also mentions that the said piper 'makes more out of variety in all parts with the double small one, than I thought could possibly have been made'. It is more than likely that double chanters such as have been described above have a close affinity with the old Magdeburg bagpipe of Germany, noted by Praetorius.

At the present day, double chanters are in regular use on the 'Union' pipe in Ireland, but the two bores are alike in every way, and play in unison. This is done in order to double the volume of sound for concert work; the chanters are, incidentally, exceedingly awkward to fit with reeds. There is also an Irish chanter with an ordinary single bore, but having a smaller subsidiary bore alongside in the same piece of wood. This smaller bore is in reality a drone, fitted with one key, and it is capable of sounding the keynote or a third lower, at will.

In conclusion, as a matter of interest, it may be added that the writer—formerly a small-pipe maker—has recently constructed a bagpipe with double bore and single drone, using all the essential measurements given by Talbot. It works out in practice exactly as it had been previously figured out in theory, forming an interesting link with the past, and one that had been all but lost. (See Plate X.)

★

The author wishes to record his gratitude to Mr Anthony Baines for his assistance in transcribing Talbot's notes.

NIGEL FORTUNE

Giustiniani on Instruments

Until the end of the sixteenth century, musical literature was produced almost entirely by theorists. In the Baroque period when the literature of music became more and more extensive, theory occupied a less commanding place as writers began to discuss the history, performance and personalities of music[1]. Monteverdi, the professional composer, already emphasized the weakened authority of the theorists by flouting their rules with his unprepared discords, and he was able to justify his actions before the outraged Artusi. It was also about this time that the gentleman-amateur, with little experience of practical music-making, introduced a new genre of non-theoretical writing by noting down his impressions of the music of his time and of those who performed it. This kind of writing was anticipated only by isolated examples such as Castiglione's remarks on music in *Il Cortegiano* and those to be found in the works of Folengo. Its rise also coincides with the new prominence accorded to the composition of chamber-monodies, which attracted the attention of several gentlemen-amateurs and prompted them to publish their songs. The passage which provides the main body of this paper is from one of the earliest and least-known examples of this genre, the *Discorso sopra la Musica de' suoi tempi* by Vincenzo Giustiniani. This work covers a wide range of musical topics; I have confined myself here to the remarks about instruments and performers upon them.

Giustiniani is a name notable in the history of Italy at the time which concerns us. Vincenzo (*d.* December 28, 1637) came from the Genoese branch of the family and later settled in Rome, where he wrote his *Discorso*. He was a typical cultivated amateur, interested in the arts and fond of travelling. He is referred to by contemporaries as 'doctus et perhumanus vir' and as 'magnifico e culto'. However, he did not, like an amateur such as Giovanni de' Bardi, take an active part in changing the course of the music of his day, nor was he a musical scholar like G. B. Doni; he claims only to have attained some little skill in the practice of music, and to have learnt much in conversation with friends. Above all he does not wish, in his discourse, to appear presumptuous.

This work is the sixth of a series of eight discourses: *Miscellanea di cose diverse, per la Curia Romana . . . Varii discorsi, instruzioni . . .*, in which Giustiniani deals with such subjects as painting, travelling, hunting and being head of a household. The original manuscript is in the library of the *Archivio di Stato* at Lucca (O.49 of the Orsucci collection—at one time, *c.* 1640, it belonged to one Nicolò Orsucci). The manuscript is undated, but we can at least assign a date to the discourse on music, for Giustiniani remarks at one point that Vincenzo Ugolino, choirmaster at St Peter's, Rome, 'is now in Parma, whither he has been summoned for the marriage of the . . . Duke with . . . Margarita de' Medici . . .'; this marriage took place in 1628. This discourse was first published in a limited edition of 150 copies by Salvatore Bongi at the Tipografia Giusti, Lucca, in 1878. For my translation, I have used Angelo Solerti's reprint in

Le Origini del Melodramma (1903), which also contains Bongi's introduction to the Lucca edition (pp. 98ff). Wherever an instrument whose name is different in Italian is first referred to, the Italian name is given in brackets; I have also included in brackets those sections of the Italian from which I have departed especially far in translatiion. The original of this translated extract is in Solerti, pp. 123ff.

★

In the first two parts I have discussed music appropriate to the human voice; now it remains for me to say something about the sounds to be derived from different kinds of instruments. Since you will want to know the essential difference between vocal and instrumental music (*la voce e'l suono*), I shall say quite simply, leaving aside all that has been written on this question, that, in my view, instrumental music is derived from inanimate objects. It arises out of a beating or compressing of the air, which then issues and is diffused variously according to the frequency and the intensity of the action upon it, as, for example, happens with the anvil (*incudine*), bell (*campana*) and organ (*organo*), and all wind instruments (*stromenti da fiato*) and viols (*viole*). Vocal music, on the other hand, is produced by all live creatures, but above all by Man.

The usual instruments are organs, the lute (*liuto*) or theorbo-lute (*pandora*)[2], the harp (*arpa*), harpsichord (*cimbalo*), theorbo (*tiorba*), guitar (*chitarra*), and lyre[3]—all instruments to which one or more persons may sing. And then there are recorders (*flauti*) and fifes (*piferi*), consort-viols (*viole di consorto*) and the lyra-viol (*viola doppia o sia bastarda*), the violin (*violino*), the cornett (*cornetto*), the transverse flute (*pifero todesco*), the *sordellina*[4], the bagpipes (*piva*), the colascione (*culascione*)[5], the *sanfornia*[6], and others which are modifications of those which I have listed. Alessandro Piccinino[7], from Bologna, invented the pandora, a theorbo-lute (*liuto tiorbato*) with many strings added in the bass and at the top, and, between these, others of brass or silver; so that, because of the great range (*la larghezza delle note*) and the number of strings, you can play any perfect composition exquisitely, with an advantage over other instruments in the tremolo (*trillo*) and in playing softly and loudly. Alessandro's brother, Geronimo, who died in Flanders, used to play this instrument excellently, as does now a third brother, Filippo, who, as I said above, serves the Catholic king[8].

The double harp (*arpa doppia*) is mainly found now in Naples; it was introduced to Rome by one Gio. Battista del Violino, so called because he played the violin so well. And now Orazio Michi (*Oratio Mihi*) plays this harp quite marvellously[9]. Apart from the usual tech-

nique, he also has a special way of damping (*smorzare*) the sound of the strings (which, if continued, would cause discord and cacophony), a difficult tremolo and all manner of other devices. Girolamo (*Geronimo*) Frescobaldi of Ferrara is our leading performer on the organ and harpsichord, both in invention (*artificio*) and in the agility of his hands. The aforementioned[10] German, Gio. Geronimo [Kapsperger][11], who is also a composer and assists in the performance of chamber-music in the palaces, is our leading theorbo-player. This instrument has appeared only in our day, and Gio. Geronimo has greatly improved its status by his manner of playing. There are, in addition, many performers on other instruments, whom I will not bother to name, except Cavaliere Luigi del Cornetto, from Ancona, who used to play the cornett marvellously. He played it many times in my room to the accompaniment of the harpsichord; the harpsichord was closed, so that one hardly heard it, but he played his cornett with such restraint and control that many distinguished music-lovers who were present were amazed that it did not drown the sound of the harpsichord. On the lyra-viol, I have heard one Orazio della Viola, who served the Duke of Parma, and recently in Rome an Englishman[12], who plays incomparably well. People used to entertain themselves with a consort of viols or recorders, but this practice has now fallen into disuse, because it is difficult to keep the instruments constantly in tune—unless you tune them frequently they become quite useless—and hard to get enough people together to form the consort. Experience taught us that, because all the instruments sounded alike (*l'uniformità del suono e delle consonanze*), such an entertainment most often led to boredom, and succeeded rather in inducing sleep than as a pastime for a hot afternoon. In former days also, people used to play the lute a great deal; but this instrument has now been almost entirely abandoned since the introduction of the theorbo. The latter has easily found general acceptance, since it is more suitable for singing to, even indifferently and with an unpleasant voice, and it also gets round the difficulty of learning to play the lute well. Furthermore, the Spanish guitar (*chitarra alla spagnola*) came into favour at the same time throughout Italy, especially in Naples, and it seems almost as though the guitar and the theorbo have conspired to banish the lute altogether. In this they have succeeded, just as the Spanish fashion in clothes prevails over all other fashions in Italy. The above-mentioned Alessandro Piccinino has lately invented an instrument, similar to Apollo's lyre (*plettro d' Apollo*), which is a combination of theorbo, lute, cittern (*citara*), harp and guitar, and he performs wonders on it; but it will never be widely used because to play it with his facility will always be found so difficult.

Performance on the Neapolitan guitar (*chitarra napolitana*) has now completely lapsed in Rome and almost completely in Naples, where Don Ettore Gesualdo and Fabrizio Fillamarino used to play excellently in consort with the aforementioned[13] prince of Venosa. The sordellina was also invented in Naples and introduced to Rome, where it has not continued in use, because it is an imperfect instrument; it pleases only at a first hearing and then, because it lacks great variety of tone and is unsuitable for singing to, it soon becomes tedious. The sound of the trumpet (*tromba*) is admirable in war, and for exhorting and warning cavalry in local actions; but nowadays it is not used by the nobility, only by mercenaries. As a result of the opportunity afforded by war, there are many in Flanders who play it extraordinarily well, as there also are in England. The same may be said of the drum (*tamburo*) and of the bosun's whistle (*fischio*), used in galleys and by the Germans and Swiss. Fifes are used in navies; in ocean-going ships, they are played most beautifully. They are also used on land, notably in Spain, where they are called *Geremias*[13a]). In Italy, they are played in the festivities of the smaller towns, just as consorts of violins are; they are also used to accompany the merry-making of the vulgar in the big towns. However, performances on the fife, or on the transverse flute (*traversa all'usanza todesca*), in which musical counterpoint, grace and precision are the aims: these are hardly to be noted in Italy. In Rome, Signor Giulio Cesare d'Orvieto used to play one; and, to the astonishment of his hearers, one of the leading gentlemen of the city at the present time boasts the playing of this instrument among his many virtues and honourable practices.

The *sanfornia*, which is called in Rome by an offensive name, and in Lombardy *viabò*, would not normally deserve mention here, for one usually sees it in the mouths of the rabble;[14] since, however, it has been, as it were, ennobled by Signor Ottaviano Vestrii, who played it with musical intent and with just tuning of the notes, I do not pass it over. I have many times heard him play, amongst others, Luca Marenzio's madrigal beginning 'Vestiva i colli'[15]. I have heard the same madrigal on the bells of the campanile of the principal church in Antwerp; the player has the book in front of him and touches the keys as though he were playing the organ[16]. I was told that this madrigal is put to similar use in 's-Hertogenbosch (*Bolduch*) and other places in Brabant and Flanders. A certain Bolognese goldsmith, Francesco Tinella, a man highly regarded by all, devised a brass sphere, tightly closed, with some pieces of metal inside, which, with the slightest movement, produced an unexpected harmony, to the delight and amazement of those who heard it[17].

It will be seen that, in addition to a comprehensive account of various instruments, Giustiniani gives a representative selection of performers, with perhaps a slight bias towards those who were active in Rome. This selection can be supplemented by those mentioned, for example, by della Valle[18]—the violinists Gregorio and Michel'Angelo,[19] Gio. Francesco del Leuto, Pietro Eredia, the organist of the church of the Gesù in Rome, and the cornett- and violin-players who served the Bishop of Padua; in Scipione Cerreto's *Della prattica musica vocale et instrumentale* (Naples, 1601); and in various prefaces, such as those to the edition by Malvezzi (Venice, 1591) of the 'Intermezzi' composed by various musicians for the marriage of Grand Duke Ferdinand I de' Medici in 1589, to the early Florentine operas, to D. Romano Micheli's *Musica vaga et artificiosa* (Venice, 1615) and several other works. The leading Italian theorist of the first half of the seventeenth century, G. B. Doni, who is one of the most sensible and interesting writers on music of any time, has comparatively little to say about instruments and their players, although there is at least one little-known remark of his which is worth mentioning. He describes[20] how the Roman organist, composer and engraver, Nicolò Borboni, invented an organ which produced its sounds *per attratione, & non per infusione del vento*, a principle which seems to have anticipated by more than two centuries that of the American organ.

NOTES

[1] *Cf.* Hercole Bottrigari, *Il Desiderio overo De' Concerti di varij Strumenti Musicali* (Venice, 1594: facsimile edition with introduction by Kathi Meyer, Berlin, 1924), p. 40: 'Musici Teorici, o specolativi, de' quali hoggidi se ne trovano pochissimi. . . .'

[2] Not the usual English meaning: *cf.* below.

[3] Presumably the lyra da gamba, a bass instrument occasionally used for chordal continuo-playing.

[4] A small bassoon-like instrument.

[5] A kind of lute (derived from the Arabian variety) that was especially popular in southern Italy. *Cf.* E. J. Dent, *Alessandro Scarlatti: his Life and Works* (London, 1905), p. 51, for a quotation of a characteristic figure for this instrument. Fasolo in his fascinating *Il Carro di Madama Lucia* (Rome, 1628) set the following poem to music: 'Sotto un ombroso faggio / Il primo dì di maggio / Il Pastore Damone / Sonava il Colasone / E risonava l'aria in simil guisa / Rin tien tirin tren tirin tren', etc.

[6] See note 14 below.

[7] Alessandro Piccinini (*c.* 1565–*d.* before 1639), whose father and brothers were also lutenists, was a Bolognese musician in the service of Duke Alfonso II d'Este at Ferrara, and later of Cardinal Pietro Aldobrandini in Rome. He also became a member of the *Accademia de'Filomusi* in Bologna. In 1623 he issued an *Intavolatura di Liuto et di Chitarrone*, whose preface gives information about himself and his brothers; and in 1639 his son published an *Intavolatura di Liuto* after his father's death. *Cf.* Georg Kinsky, 'Alessandro Piccinini und sein Arciliuto', *Acta Musicologica*, X (1938), 103ff.

[8] Solerti, *op. cit.*, p. 111. Giustiniani here explains how Filippo Piccinino serves King Philip IV of Spain and his (Philip's) two brothers, as performer on the lute and pandora. The royal brothers all delighted in music, we are told, and sometimes sang and played together.

[9] Orazio Michi dell' Arpa is also praised by Pietro della Valle in his discourse,

Della Musica dell' età nostra (1640) (in Solerti, *op. cit.*, p. 159) as a great virtuoso on the harp. Maugars in his *Response faite à un Curieux sur le sentiment de la Musique d'Italie* (1639) mentions Orazio and Frescobaldi as the outstanding musicians he had heard in Italy (German translation by W. J. v. Wasielewski in *Monatshefte für Musikgeschichte*, X (1878), p. 8). Orazio was born in southern Italy in 1594–5, but spent most of his life in Rome, including the period 1623–1630 in the service of Cardinal Maurizio of Savoy. He died in Rome on October 26, 1641. As a composer, he is known principally by a number of sacred solo songs in manuscript, mainly in Rome, and by contributions to Vincenzo Bianchi's *Raccolta di Arie Spirituali* (1640). *Cf.* Alberto Cametti, 'Orazio Michi dell' Arpa', *Rivista Musicale Italiana*, XXI (1914), pp. 203–277.

[10] Solerti, *op. cit.*, p. 122. Giustiniani describes him as one of the leading composers of Rome.

[11] Johann Hieronymus Kapsperger, to give him his original name, was a German nobleman who moved to Italy early in the seventeenth century, finally settling in Rome before 1610. He was an outstanding performer on the theorbo and other instruments of the lute family, and was also a prolific composer. He produced several volumes of *Villanelle* for 1–3 voices, *Arie* and *Motetti passeggiati*, and music for the church, but much of his output is dry and undistinguished. He died after 1640.

[12] A letter from Daniele Nys to the court of Mantua, dated from Venice, August 2, 1625, reads: 'An English gentleman has left here today for Verona and Mantua. He is a musician to the King of England and plays more divisions on the bass viol than one can play on the lute. He is [then] going on to Rome under the pretext of buying pictures to take away in Holy Year, and the King is much indebted to him. If you will make him known to His Highness [the Duke of Mantua], I know that [the Duke] will be pleased with his virtuous qualities, and I therefore beg you to introduce him. The Duke shares his passion for paintings and drawings, and I know that His Majesty of Great Britain will be grateful to anyone who provides a welcome for this connoisseur. His name is Nicholas Lanier'. A second letter from Nys, dates from Venice three weeks later, reports Lanier's return from Mantua, quite overwhelmed by his reception there. Grove's *Dictionary*, art. 'Lanier', states that Lanier stayed in Italy for three years; he was certainly in Rome in the early part of 1626, and in 1628–9 he was paid £3 by the English court treasurer 'to buy two Italian musique cards to compose upon'. It is very possible that Lanier was the English virtuoso on the viol that Giustiniani heard 'recently'; the lyra-viol and the division viol required the same technique and agility of hand, and Lanier is almost certain to have played both.

[13] Solerti, *op. cit.*, p. 111. Here Giustiniani praises Carlo Gesualdo, prince of Venosa, for improving the style and methods of composition.

[13a] This would suggest that the word *piferi* could also mean shawms. See the article on Catalonian shawms by Anthony Baines in this issue of the JOURNAL. —ED.

[14] Solerti, *op. cit.*, mentions a Bolognese musician called Giuseppe del Biabo, who played on the *Cacciapensieri*. Initial 'B' and 'V' before an 'i' would be interchangeable in seventeenth-century spoken Italian; Bologna is not far from Lombardy, and *scacciapensieri* is the Italian term for Jew's harp. (See G. Mazzini's paper, 'Un piccolo strumento musicale scomparso: Lo Scacciapensieri'). Signor Vestrii may have been a virtuoso on the Jew's harp, therefore.

[15] I can find no record of Marenzio's having set this text. Giustiniani probably means Palestrina's setting, which won great renown; della Valle, *op. cit.*, in Solerti, *op. cit.*, p. 150, for example, singles out this madrigal as 'famoso'.

[16] John Evelyn records a similar method of performance at Amsterdam in 1641. Quoted in Curt Sachs, *The History of Musical Instruments* (New York, 1940), p. 378.

[17] *Cf.* Sachs, *loc. cit.*

[18] della Valle, *op. cit.*, in Solerti, *op. cit.*, pp. 158ff.

[19] Michelangelo Rossi, composer of *Erminia sul Giordano* (Rome. 1637).

[20] G. B. Doni, *Compendio del Trattato* (Rome, 1635), p. 57.

★

NOTES AND QUERIES

A BARREL ORGAN TRANSCRIPTION

A popular exhibit at the Society's exhibition has been the small barrel organ built by Fentum, London, in about 1817. It has two stops —closed 8′ diapason, and open 4′ metal—each of an octave and a half in compass. A third stop brings in a triangle. There are three cylinders each providing ten tunes, most of them popular songs, English, Scottish and Irish. Besides these there are a few marches, waltzes and hymns, and also 'God Save the King', which became a favourite among the visitors largely on account of its rich and, as it seemed to many, quaint ornamentation.

Ornamentation preserved in this way on mechanical musical instruments is never likely to be without interest, and it surprises me that, considering the multitude of such instruments still in existence, so little of their material is available for study. A transcription of the thirty tunes of this Fentum organ alone would make quite a valuable little publication, as may be gathered from its version of 'God Save the King', here shown in a transcription made from the cylinder itself. It may be as well to point out that although the brass bridges (which actuate the levers working the valves and hence the pipes) are always a little shorter than the theoretical lengths of the notes would demand, this is merely a technical detail of construction whose purpose is to avoid a wearisome sostenuto and the danger of the sound of one pipe

continuing after the next has begun to sound. With these shortened bridges the effect upon the ear is one of elegant legato. When, however, a bridge is further shortened so that the effect becomes staccato to the ear, a dot is placed over the note in the transcription. The quavers are equal in this tune. It is given in the key at which the organ now sounds at modern pitch.

ANTHONY BAINES

TALBOT AND THE DOUBLE BASS

TO THE EDITOR:

May I be permitted to offer a brief note on the contra-basses described in the Talbot MS (*GSJ*, III) and on Mr Donington's commentary, since I appear to be involved?

While I naturally bow to Talbot's evidence that the double bass measured by him was a viol, or at any rate was commonly considered so, I should like to point out that he gives the tunings of what are clearly two entirely different instruments, one a close-tuned, low-pitched-five-stringer called *Double Bass*, and the other a six-stringed instrument of orthodox viol-type tuning called by him *Violone or Double Bass*.

The range of pitch between the outer strings of the first of these is almost identical with that of the modern four-stringed bass tuned in fourths, but the tuning of the lowest string seems variable, Mr Finger preferring it raised a tone from *F* to *G*. The close tuning certainly implies a large instrument with a very elementary fingering technique, and the setting quoted smacks of *scordatura*. There would just be room for five chromatic frets on a neck 1′ 3″ bare length, giving the instrument a total compass of an octave and a fifth. Such an instrument, harnessed as it were by nature to its lowest register, would be a true, if incomplete, double bass, customarily though not exclusively doubling the ordinary bass in the sub-octave, just as the modern instrument does.

The Violone on the other hand is a *quint*, standing a fifth below the viola da gamba, and although its downward compass limit is much the same as the former double bass, it is obvious that its tessitura lies considerably higher.

I cannot equate two instruments having a difference of a seventh between their respective top strings, nor is it likely that the example measured by Talbot, with a string length of 40″, could have had its top string tuned to 'fiddle' G (an octave above that of the modern double bass) even allowing for the slightly shorter string length and the lower pitch then prevailing. Also, had the two instruments been identical in other respects, I should have expected the former, with five strings, either to have retained the basis of viol tuning or to have adopted 'spread' tuning in order to regain some of the compass lost by shedding a string.

It seems reasonable to suppose that the short-necked, big-bodied instrument of Talbot's measurements was Mr Finger's own five-stringer. Its downward limit should be noted. Mr Donington rightly points out that it approximates closely in size to the modern double bass. Now, if Finger's instrument were of the viol family, one is

tempted to speculate on its relationship with the 'regular violone, an octave lower than the *D* to *d'* Bass viol'. Was the 'regular violone' a larger or a smaller instrument? Our authorities unanimously insist that it was smaller and that a 'child could play it'. If they are right—and that is a question which cannot be discussed here—then Finger's *larger* instrument, *a third or fourth higher* as to its bottom string, and so similar in its proportions to Mr Gerald Hayes' 'coarse and cumbersome giant', was certainly no viol. But clearly, the protagonists of the 'true' violone cannot have it both ways. If the instrument were so perfect, complete and manageable, there could have been little purpose in the seventeenth century in making it not only larger but of more limited compass, upwards and downwards. In fact, of course, a large-bodied instrument with variable 'medium' tuning has existed from the time of Praetorius to the present day, and Talbot gives us a fleeting glimpse of what may have been the only specimen of the 'true' double bass in England at the end of the seventeenth century.

I am, Yours, etc.,

ERIC HALFPENNY

FOUR DUTCH RECORDER BOOKS

During the first fifty or sixty years of the seventeenth century a number of books were printed in Amsterdam for use by Dutch amateur musicians, designed for the kind of musical occasion that has become familiar to us through the paintings of Dutch interiors by men like Vermeer or Terboch. Most of these books are now exceedingly rare, many of them surviving only in unique copies in the leading musical libraries, and the music they contain has been little studied.

Four of these books, to my knowledge, were for the recorder:

Der gooden Fluyt Hemel . . . Eerste Deel (P. Matthysz, 1644). Copy in the Royal Library, Brussels.

Der Fluyten Lust-Hof . . . Eerste Deel (P. Matthysz, 1647). Copy in the British Museum.

Der Fluyten Lust-Hof . . . Tweede Deel (P. Matthysz, 1654). Copy in the British Museum.

Onderwyzinge hoeman alle de Toonen en halve Toonen . . . op de Handt-Fluyt . . . zal . . . Blaezen (P. Matthysz, 1654). Two copies in the British Museum, one from the Hirsch collection.[1]

The last of these is the easiest to discuss. It is a simple six-page tutor for the descant or tenor recorder, giving fingerings and trills for the complete chromatic scale of two octaves and a note (*c'*—*c'''* and *d'''*). A sentence at the end informs

us that the tutor was written by G. van Blanckenburgh, organist of Gouda, at the request of the publisher; and it is clear that Blanckenburgh was at pains to be as succinct as he could be. Indeed some of his fingerings suggest that he was perhaps not perfectly acquainted with the instrument he was writing about. Here is his complete list of fingerings, rearranged into an orderly chromatic progression.

	note	*c*	*c♯*	*d♭*	*d*	*d♯*	*e♭*	*e*	*f*	*f♯*	*g♭*	*g*	*g♯*	*a♭*	*a*	*a♯*	*b♭*
right hand	thumb	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	index	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	middle	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H	O
	ring	C	C	C	C	C	C	C	C	C	C	H	L	O	O	C	
left hand	index	C	C	C	C	C	C	C	C	M	L	O	O	O	O	O	O
	middle	C	C	C	C	C	C	C	L	O	O	O	O	O	O	O	O
	ring	C	C	C	C	H	H	O	O	O	O	O	O	O	O	O	O
	little	C	H	L	O	O	O	O	O	O	O	O	O	O	O	O	O

	note	*b*	*c*	*c♯*	*d♭*	*d*	*d♯*	*e♭*	*e*	*f*	*f♯*	*g♭*	*g*	*g♯*	*a♭*	*a*	*a♯*
right hand	thumb	C	C	M	O	O	H	H	H	H	H	H	H	H	H	H	M
	index	C	O	O	C	O	C	C	C	C	C	C	C	C	C	C	C
	middle	O	C	O	O	C	C	C	C	C	C	C	C	C	C	C	H
	ring	O	O	O	C	O	C	C	C	C	C	C	C	H	L	O	O
left hand	index	O	O	O	O	O	C	C	C	C	M	M	O	O	O	R	C
	middle	O	O	O	O	O	C	C	C	L	O	O	O	O	O	O	C
	ring	O	O	O	O	O	H	H	O	O	O	O	O	O	O	O	C
	little	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

—alternative trills—

	note	*b♭*	*b*	*c*	*d*	*e*	*g♭*	*g*	*a*	*b♭*	*c*	*d*	*e*	*g♭*	*g*
right hand	thumb	M	M	M	M	C	C	C	C	C	C	O	H	H	H
	index	C	C	C	O	C	C	C	C	C	O	C	C	C	C
	middle	C	O	O	O	C	C	C	C	O	C	C	C	C	C
	ring	O	O	O	C	C	C	C	O	C	O	O	C	C	C
left hand	index	C	C	C	C	C	R	O	C	O	O	O	C	R	O
	middle	C	C	C	O	C	O	C	O	O	O	O	C	O	C
	ring	C	C	R	O	R	O	O	O	O	O	O	R	O	O
	little	O	O	O	O	O	O	O	O	O	O	O	O	O	O

Notes: C=closed. O=open. H=half-closed. L=a little less than half-closed. M=a little more than half-closed. R=finger at rim of hole. Bold-face letters show the trilling finger.

Blackenburgh's sole instructions other than his directions for fingerings consist of two remarks: stop the holes neatly; if you blow too hard or too softly, your intonation will suffer. The most interesting feature of his fingering method is his marked preference for half-covering rather than cross-fingering, and his niggling attention to differences of intonation between, for example, ♯ and *g*♭. Modern connoisseurs of the instrument would by no means agree with all his suggested fingerings.

The other three books are a curious mixture. The 'Flute-Heaven' of 1644 was probably compiled by the publisher himself, and it shows signs of a certain lack of musicianship. It begins with a number of tunes set for two descant (or tenor: the instruments are never specified) recorders: ten *ballets*, four *airs*, two *courants*, an *allemand*, a *simphonie*, a *paduaen*, and a group of pieces with rather cryptic titles—*Garint*, *Poliphemus*, *Postilion*, *Carileen*, *Comagayn* (i.e. Dowland's song 'Come again'), *Frere frapar*. Then follow six *allemands* and two other pieces, set for three descants or tenors. The tunes are good but the harmonisations are rather naive, with their consecutive fifths and their bad part-writing. Nevertheless they have considerable charm. The book ends with a group of miscellaneous tunes for unaccompanied recorder, many of the tunes being followed by an elaborate division or variation (*gebroocken* is the word used in the original). Some of the tunes are French, others are Dutch, and a few (*Kits Allemand*, *Tweede Nachtegael*) are English. One of them, the *Pavaen de Spangie*, was widely current throughout North-Western Europe at this time; the Fitzwilliam Virginal Book contains a very elaborate set of variations on it by John Bull.

The 'Flute Pleasure-House' (1647-54) is a much more interesting collection, considerably larger than the earlier book and prepared by J. J. van Eyck, a far more competent musician than Matthysz. The book is dedicated to the great seventeenth-century Dutch scientist and savant, Constantin Huygens, who was himself an enthusiastic amateur musician and composer.[2] The first volume is more than a hundred pages long, most of the music being for unaccompanied descant (or tenor) recorder. Most of the tunes are followed by a number of divisions, sometimes just a single variation, but often as many as five; and van Eyck seems to have drawn upon an international repertory of French, Dutch, Italian and English tunes. The English tunes include [Dowland's] *Pavaen Lacrymae*, set twice, first with a single division and then with three bravura divisions; *Daphne* (three settings; the same tune as Farnaby's in the Fitzwilliam Virginal Book); *Mal Sims*; *Rosemondt* (two settings; the tune is a variant of Farnaby's 'Tower Hill'); *Stil, stil een reys* (a variant of 'Parson's Farewell'); *Engels Nachtegaeltje* (found in many mid-seventeenth century English collections under the title 'The new nightingale'); *Comagain* (another set of variations on Dowland's song); *O slaep, o zoete slaep* (with three divisions; the tune is 'Farewell dear love'); *Kits Almande* once again; and several tunes called merely *Engels Liedt* or, in one instance, *Een Schots Lietjen*. Among

the Italian tunes is [Caccini's] famous song, *Amarilli mia bella* (three settings; two solo ones, with two and three divisions respectively, and a setting for two recorders). The five two-part pieces also include another 'international' tune, *More palatino*, used as a theme for keyboard variations by Frescobaldi, Sweelinck, Buxtehude and the English virginalists, Robert Johnson and Orlando Gibbons (who calls it 'An Italian Ground').

The second volume of the 'Pleasure-House' is little more than half the size of its predecessor, but its musical interest is just as great. The English tunes include *Malle-symen* (i.e. 'Mal Sims'; with three divisions); *Excusemoy* (i.e. Dowland's 'Can she excuse'); 2. *Courant of Harte diesje waerom zoo still* (i.e. Dowland's 'Now, oh now, I needs must part', also known as 'The Frog Galliard'); and *Onder de Linde groene* (i.e. 'Lord Zouche's March', found in Morley's *Consort Lessons* and elsewhere). In addition there are a number of French and Dutch dances, folk-tunes and other odds and ends (including [Gastoldi's] *Questa dolce sirena*, from his book of five-part balletts), all set with divisions. The volume ends with six fantasies or preludes, and a group of elaborate divisions on psalm-tunes.

The music contained in these books[3] does not set out to be great music, though songs like Dowland's 'Lachrymae' must be considered masterpieces by any standards. The books represent a level of musical attainment midway between the man who sings by ear and the semi-professional or professional player or singer, and they were addressed to very much the same kind of musical public that bought Playford's anthologies of music for cittern, lyra-viol, flageolet or fiddle. They throw an interesting light on the standard of playing that a seventeenth-century amateur could be expected to achieve, and they illustrate some of the international cross-currents that make the study of early seventeenth-century instrumental music such a fascinating one.

THURSTON DART

NOTES

[1] It is a great pleasure to acknowledge here once again the never-failing courtesy of the librarians and staffs of these libraries.

[2] See *Correspondence et oeuvres musicales de Constantin Huygens*, ed. Jonckbloet and Land (Leyden, 1882).

[3] For some extracts, see Plate XI.

★

The following corrections should be made to Dr Nef's article on 'The Polychord' in *GSJ*, IV. P. 20, l. 22: '4, 8, 16', not '4, 6, 8'. P. 22, l. 5: add [18] after 'Boethius'. P. 22, l. 9: the footnote reference after '(1492)' should be [18a]. P. 24: add footnote '[18a] Edition by G. Cesari (1934), f. bVI. See J. Handschin, *Acta Musicologica* (1944–5). p. 6'.

BOOK REVIEWS

LEOPOLD MOZART, *A Treatise on the Fundamental Principles of Violin Playing.* Translated by Editha Knocker with a Preface by Dr Alfred Einstein. Second edition. (London: Oxford University Press.) 1951. 269 pp. Ill. 30*s*.

In making Leopold Mozart's Violin School accessible to English students the late Miss Knocker performed the last, and in some ways the greatest of her many services to them, for the prevailing fluent sterility of the modern fiddler arises largely from the fact that he and his teachers have lost contact with the roots of their art.

In this Second Edition the translator has made good use of the opportunity for revision, not only by improving many details and making more distinct some points of variation between the editions of 1756 and 1787 but, above all, by amending the mistranslation of references to the *affekt*, which Ernest Newman pointed out as the only serious failing of the first edition.

English musical literature is, to say the least, not helpful on this interesting subject, and we would like to know whether anyone has yet produced a thorough practical exposition of the doctrine of the *affekt* for English readers.

Many performers who are trying to recover an authentic presentation of music governed by this aesthetic principle would, one feels, welcome information concerning not only the fundamental nature of the principle itself, but covering also such practical points as recognition of the 'affective' significance of musical forms and details, and the kind of ornamentation and (if possible) manner of delivery which was considered suitable to the illustration of a particular *affekt*.

Mozart's own observations are enough to show us how important these things are, but scarcely more, since he not only wrote for people who might be expected to take a good deal for granted, but also endeavoured to restrict the discussion of general matters in order to prevent his book from becoming too expensive.

There is, however, no lack of completeness in the way he deals with the subject of violin playing, throwing in 'on the side' whilst doing it a vivid self-portrait built up of humorous and often caustic comment, sage advice and entertaining digression.

In spite of some clumsy manoeuvres with the fourth finger for the avoidance of open strings; failure to exploit the possibilities of the half position (not the same as Mozart's *halb applicatur*, which corresponds to our second position); and that too rigid association of fingering with notation which has only begun to break down during the present century, Mozart's left-hand technic is an advanced one, and one can quite easily see a Mozart-trained fiddler dealing adequately with music like the Solo Sonatas of Bach, which still remain the ultimate test of solid accomplishment on the violin.

The same thing can be said with regard to the bowing. Mozart begins his treatment of the bow technic with an exposition of the rule of the down bow according to the French School, and goes on to develop a range of varied bowings quite modern in its scope and variety.

There is some ambiguity on the question of lifting the bow, as one is frequently directed to do this under circumstances in which, even with the shorter bow used in Mozart's day, it would seem more comfortable and natural either to stop it on the string, or to lighten the pressure without actually lifting it.

It is evident that he made fairly free use of lifted bowings, though there is nothing to suggest the employment anywhere of the true spring bowings of the modern technic.

When dealing with the use of the bow for expressive purposes Mozart offers his most important lesson to the modern fiddler who, since the continuous and exaggerated vibrato came into fashion, has been tending to make less and less use of dynamic inflection within the bowstroke, and clear articulation of phrasing in classical cantabile playing.

We are not, of course, advocating the abandonment of vibrato, but any good player who will, after a careful study of Leopold's Chapters V and VII, make the experiment of working at the Adagio of Wolfgang's Third Violin Concerto without vibrato, should benefit from some very interesting discoveries about the phrasing and bow-management of fiddlers who relied largely upon the bow for arousing in their listeners that which Leopold himself might have described as 'the emotion corresponding to the *affekt* of the piece'.

It is hoped that this second edition will be even more successful than was the first one, and that many valuable lessons will be learned from it.

K. M. S.

C. P. E. BACH, *Trio in F major* for bass recorder, viola (or two violas) and harpsichord or pianoforte (with violoncello *ad lib.*). Ed. H. Brandt-Buys. (London: Schott.) Score and parts: 4*s.* 6*d.*

The publication of C. P. E. Bach's Trio 'for bass recorder, viola and harpsichord' in the series 'Original Music for Recorder' is a welcome stroke of enterprise from Schott's. At first sight it seems that the welcome would be limited in theory to those who know a good piece of music when they see it, and in practice only to those rare birds who possess a bass recorder. But Schott's have missed their opportunity and so too, by their oversight, have many musicians whose legitimate prey this Trio is. The editor (and 'arranger', whatever that may mean) timidly proposes in a tantalizingly inadequate preface: 'as C. P. E. Bach himself arranged this Trio for 2 violins and figured bass in B flat, it seems permissable (*sic*) to perform the Trio with a second viola in place of a bass recorder if the latter is not available'. Accordingly he provides two viola parts (both fussily bowed by an additional expert) apparently in hopes that two violas are readily available for domestic performances. The editor's scruples about substitute instruments are admirable, but scarcely conform to eighteenth-century practice: and if he had been a little more thorough he might have found other MSS of this work (thirteen exist, including an autograph in Berlin) describing the Trio as for bass flute, *bassoon*, and figured bass.

Indeed only three MSS specify bass recorder; some, with characteristic business sense, are content to indicate 'any available instrument' in this, the composer's only sonata for two alto instruments. Schott's have lost a considerable sale, no doubt to cellists as well as bassoon players, and with it some financial strength which might well be devoted to more such publications: why indeed should not alternative parts for two clarinets also have been published, or at least a part for *cor anglais*, whose fingering in the appropriate register is note for note the same as the bass recorder (or bassoon)?

The music itself is as usual printed with excellent clarity, but a few comments are called for. In the second movement there are misprints: *passim*, where *tr.* has been misread as *ten.* (!), and in bar 69 where the bass-recorder's sixth semiquaver should be F, not G. The realization is not particularly stylish—it tends to be rather dull and to double the upper parts—and the ornaments, footnoted *ad nauseam*, are too fussy for those who cannot suit their ornaments to their instrument, especially at the crotchet=144 indicated so dogmatically for the finale.

The bassoon part if used should of course be an octave below the viola part as printed: since this brings the tessitura at some places below the bass we must assume that Bach had in mind the use of the lower octave in the bass, whether by keyboard or violone. This has the additional advantage of clearing the middle register and leaving the appalling problem of balance for the two principal instruments to adjust. A further warning may be added to the alto-cross-flautist, who will be even more cross to find that the lowest written note in the bass-flute part is, inevitably, the F below middle C.

With these caveats the piece can be enthusiastically recommended as a conscientious edition of worth-while music: but a bassoonist's enthusiasm evaporates as he turns glumly to the task of copying and transposing.

M. W.

A. T. DAVISON and W. APEL, *Historical Anthology of Music.* (London: Oxford University Press.) Volume II. 303 pp. 50*s*.

The eagerly-awaited continuation (1600–1780) of the Historical Anthology. Good value. Detailed reviews may be found in *Notes*, VIII, 162; *MQ*, XXXVII, 114; *Journal of the AMS*, IV, 147; and a recent issue of *Musical Times*; buyers would do well to incorporate the corrections to be found in these into their copies. The following notes are on the instrumental items, since members of the Society will be especially interested in these. The Schein intrada for *zinck, viglin, flödt* and bass (No. 197) needs a continuo. Note the long sequence of keyboard pieces; the violin music by Fontana, Marini, Merula, Cazzati, Biber, Vitali, dall'Abaco, Tartini, Leclair, Edelmann and others; the consort music by Legrenzi (No. 220; superb), Cambert, Torelli, A. Scarlatti, Telemann (No. 271; most gracious. Contemporary MSS of the set of six quartets from which this movement is taken are in the Royal Library, Copenhagen—class-mark C.I.85. folio); movements from symphonies by Sammartini, Stamitz and Monn. The ornaments in No. 212 (Chambonnières) have been wantonly

omitted. As a clavichord-player, I must protest at the misleading headings to Nos. 216 (Froberger), 261 (Kuhnau), 288 (W. F. Bach), 296 and 297 (C. P. E. Bach). Kuhnau and Froberger wrote for keyboard, without specifying their choice more exactly; the movements printed here are far more effective on the clavichord than on the harpsichord (the editors state boldly and baldly that both movements are for harpsichord), and their idiom is quite unlike the idiom of seventeenth-century harpsichord writing. W. F. Bach's polonaise would sound ludicrous on the harpsichord, though it is perfection on the clavichord; once again it is misleading to head this 'for Harpsichord or Pianoforte'. C. P. E. Bach's magnificent collections of Sonatas and Rondos were intended primarily for clavichordists and only secondarily for pianists; the editors place the two instruments in the wrong order. One or two mistakes in No. 232 need correcting. The realizations of the continuos are for the most part excellent. English music perhaps gets rather a raw deal: no early seventeenth-century music for viols, no example of divisions to a ground, no eighteenth-century instrumental music, no keyboard music at all!

D.

REVIEWERS:

K. M. S.	Kenneth M. Skeaping
M. W.	Michael Whewell
D.	Editor

★

T. A. ARNE, *Trio-sonata No. 3 in E flat:* W. BOYCE, *Trio-sonata No. 2 in F.* Both ed. Murrill. (London: Hinrichsen.) Score and parts: about 5*s.* each sonata.

It is good to see these well edited additions to the repertory of eighteenth-century chamber music, sensibly bowed and with an effective realization of the continuos. More are promised.

Peters edition reprints: J. S. BACH, *The 16 piano concertos after Vivaldi, Marcello, Telemann, etc.*: J. S. BACH, *The Musical Offering* (Urtext): L. VAN BEETHOVEN, *Serenade, Op. 25.* (London: Hinrichsen.)

The concertos (cannot they be called 'clavier' concertos, not 'piano' concertos?) are arrangements made by Bach when he was studying the Italian instrumental style, it seems. They are by no means merely straight transcriptions; the slow movements, especially, have been elaborately ornamented until the melodic line seems Bach's own musical speech. Here are some out-of-the-way pieces that are well worth playing. (Note to the publisher: what about correcting the fantastically unidiomatic translations of the Prefaces before these fine Peters editions are reprinted? It's too good an opportunity to miss.)

C. HACQUART, 3 *Sonatas for two violins, gamba and continuo:* W. F. BACH, *Sonata for flute, violin and continuo.* Both ed. Brandts Buys. (Amsterdam: Broekmans & van Poppel. London agent: Chester.) Score and parts: about 10*s.* for each sonata.

The sonatas by Hacquart are taken from his *Harmonia Parnassia* (1686). As the editor points out in his preface, the sonatas are closer to the Italian school of the middle of the century than to the later Italians like Corelli, and their style will not be unfamiliar to anyone acquainted with Purcell's sonatas. Very little of the Dutch music of this period has been reprinted. There is plenty of it, and Hr Brandts Buys is clearly the right man to undertake the editing. Both the Hacquart and the Bach are most elegantly printed.

H. MURRILL, *Sonata for recorder (flute) and harpsichord (piano).* (London: Oxford University Press.) 4*s.* 6*d.*

One of the most interesting features of the revival of obsolete instruments has been the slow but steady stream of contemporary music specially written for them. When, as in this case, the composer has been at some pains to become familiar with the special idiom of the instruments he chooses, the result is always worth while and often exciting. Some of the keyboard writing presupposes the use of a sustaining pedal, which is perhaps a pity; by no means all modern harpsichords have sustaining pedals, and they are never found on old instruments. Most players consider them quite unnecessary, and most makers agree. Aspiring composers, please note.

[ADAM CARSE], *Catalogue of the Adam Carse Collection of old musical wind instruments*. (London: Staples Press, for the London County Council.) 88 pp. Ill. 5*s*.

A splendid catalogue of a splendid collection, given by its owner to the Horniman Museum in memory of his son. Members of the Society will remember Mr Carse's article in *GSJ*, II, together with a photograph of part of the collection. The catalogue contains a number of excellent illustrations in line by Henry H. Trivick, RBA; the publishers must be congratulated on the first-rate block-making and distinguished typography, which contribute greatly to the reader's pleasure.

Die Musikforschung, IV, pp. 185–191: W. KOLNEDER, 'Die Klarinette als Concertino-Instrument bei Vivaldi.' (Cassel: Bärenreiter.)

An Austrian musicologist discusses Vivaldi's three concertos that include a pair of clarinets as members of the concertino ensemble. All the concertos are in C major and would seem to have been written between 1720 and 1740 or so. A number of musical illustrations add to the value of the article. The notation for the clarinet parts is curiously tentative; evidently composers were still uncertain how this new instrument should be handled.

Instrumentenbau-Zeitschrift, ed. Dr Hermann Matzke. (Konstanz a. B., Zumsteinstrasse 8, Germany.) DM 7.50 a year.

A file of issues for 1950–1 is to hand (the fifth year of publication). A full six pages of each number are given over to advertising, mostly of a trade kind, but the remaining ten pages or so include much that may be of interest to members of the Society. Discussions of modern baroque organ specifications, of bell-tuning methods, of the organ built especially for the Vienna performances of the Matthew Passion in 1950, of Count Cozio di Salabue, of the International Institute for Music-Technology at Lindau, of electronic musical instruments, of an electro-acoustic harpsichord, of woodworms, mouth-organs, and exhibitions: these and much besides are contained in the pages of this interesting periodical. The Society receives copies in exchange for its own publications.

F. J. HAYDN, *Pianoforte Trio in F sharp minor*. Redistributed for the benefit of the violin and violoncello by D. F. Tovey. (London: Oxford University Press.) Score and parts: 10*s*. 6*d*.

'. . . In the whole thirty-one trios there is hardly a movement in which the string parts justify their existence. . . . The modern pianoforte either drowns Haydn's unisons or merges with them into a kind of musical whitewash that is none the better for diverging into flakiness'. So says the late Professor Tovey in his preface to this, the second of Haydn's piano trios to be published in Tovey's 'redistributed' version. The result is a complete vindication of the editor's method, and a valuable addition to the repertory of the piano trio. The romantic slow movement in F♯ major is a certain winner.

H. NEUPERT, *Das Cembalo.* [Second edition.] (Cassel: Bärenreiter.) 108 pp. Ill. About 10*s.*

A little treatise about the harpsichord, informal and unpretentious in style. Four chapters: general historical survey; types of keyboard instrument; modern reconstructions; hints for players and owners. Pleasantly printed and lavishly illustrated. One of the most interesting features of the book is the analytical table (p. 33) showing the specifications of 148 old harpsichords; the commonest one-manual layout was two 8′ stops, the commonest for two manuals two 8′ and a 4′. Only 10 per cent of the instruments had 16′ stops; modern players please note. Neupert's modern instruments are described in some detail. Subsequent editions could perhaps treat the history of the harpsichord in England a little more fully; the list of English composers for harpsichord ends 'Gibbons, Purcell, Arne'—what about Tomkins, Farnaby, Locke, Blow, Croft, Roseingrave and many others, Herr Neupert? They are at least as important as many of the French and German composers you mention. And the list of modern English makers of old keyboard instruments certainly ought to include Lambert, Hodsdon, Goble, Gough and Thomas Goff.

W. EHMANN, *Tibilustrium: das geistliche Blasen; Formen und Reformen.* (Cassel: Bärenreiter.) 176 pp. About 18*s.*

A survey of how wind-instruments have been used in Europe from the earliest times, especially in the service of the Church, and a plea for the reintroduction of an ensemble of trombones and other brass instruments into contemporary church music. Deals primarily with the German tradition and the Lutheran evangelical church. Heavy going, but with some provocative facts and ideas.

LL. S. LLOYD, *Music and Sound.* (London: Oxford University Press.) Second edition. 182 pp. 16*s.*

A textbook on acoustics that 'approaches the subject from the point of view of the history of musical composition'. Particularly recommended are the chapters on temperaments, tone-qualities, orchestral wind-instruments and the vibration of strings. Lucidly written and most accurate. A third edition might perhaps include some discussion of Seashore's fascinating theories and experiments, especially those dealing with formants.

Preludes and Voluntaries (1708). Ed. R. Colwell. (London: Schott.) 2*s.* 6*d.*

A nice reprint of a set of unaccompanied solos for the 'flute' (i.e. the recorder), published by Walsh in 1708. The nineteen pieces it contains are by composers such as Torelli, Pepusch, Corelli, Keller, Albinoni, Finger and Nicola [Matteis], and they include an unknown prelude by Henry Purcell. The original versions of these pieces may be found in Walsh's *Select Preludes and Vollentarys for the violin* (1708; copy in the Fitzwilliam Museum); the writing is highly idiomatic, and violinists would enjoy the music. What about reprinting this collection, too?

NOTES FOR CONTRIBUTORS

The following notes are offered for the guidance of intending contributors. The cost of the JOURNAL and delays in its production will be minimized by their adoption.

GENERAL

1. All contributions should be typewritten on one side of the sheet, double-spaced and with ample margins.
2. All articles and reviews will be printed in English. Contributions in other languages will be considered only if accompanied by a translation or précis.
3. All references, unusual spellings and so on should be checked before completed articles are submitted. The JOURNAL's funds are not sufficient to allow an expenditure of more than 15 per cent of the cost of composition for alterations in articles once set-up in galley-proof.
4. In all details of typographical style and layout, contributors are asked to use this publication as their model when preparing their typescripts. They are advised to keep accurate carbon copies of their articles.
5. Six author's copies of the JOURNAL will be sent free to contributors of articles, and two copies to reviewers. If offprints are wanted, they can be had at cost price.
6. Typescripts, letters to the Editor, books for review, advertisements, etc., should be addressed to the Editor, 7 Adams Road, Cambridge. The Editor cannot undertake to return articles which are not accompanied by a stamped addressed envelope.

FOOTNOTES, REFERENCES, ETC.

7. Contributions should be adequately documented. Single quotes should be used for a quotation, double quotes for a quotation within a quotation. Extensive quotations will be set in small roman as inserts; they should be indicated by single spacing. Editorial emendations or comments should be in square brackets. Omissions should be indicated by four or five dots
8. Source details of a reference or quotation should be given in a footnote. Subsequent references to a source already mentioned may be suitably abbreviated. Where abbreviations such as *loc. cit.* or *op. cit.* are used, they should be unambiguous.
9. Italics should be used for the titles of books and periodicals. They should also be used for foreign terms and phrases, but not for foreign quotations. Italics should be indicated in the typescript by underlining. The full-stop should be omitted after the symbols Mr, Mrs, M, Mme, Mlle, Dr, MS, MSS. Particles included in a surname should not have capital letters (van der Straeten, de la Laurencie).